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VOL.77

NO.1

MEDICINE

The Journal of the Indiana State Medical Association

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INDIANA

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Vol. 77, No. 1 JANUARY 1984 WINNER Sandoz Medical Journalism Award—1976, 1979

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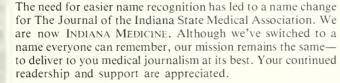
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INDIANA MEDICINE

INDIANA MEDICINE

What's in a Name?

Was 76 years old has been laid to rest. Indiana Medicine (two words) is the new name of The Journal of the Indiana State Medical Association (eight words). In changing the name, Hoosier doctors join those of several other states that have dropped cumbersome titles for their monthly magazines in favor of shorter identifications.

This publication has not been a "journal" for many years. From the beginning, in 1908, part of The Journal's mission was to report, verbatim, records of medical meetings at the county, district and state levels. Portions of every issue were, in effect, typeset minutes of meetings. Earlier, from 1849 to 1907, "The Transactions of the ISMA," an annual volume, served the purpose.

With the help of modern communications equipment—tape recorders, computers, word processors and electronic typewriters—we can now produce and disseminate information quickly and efficiently. That which is suitable for publication in Indiana Medicine will be typeset, while information requiring more immediate attention—legislative bulletins, for example—will continue to be sent to ISMA members by the quickest means available.

In other words, INDIANA MEDICINE's mission is to publish news, features and scientific material that will remain fresh at least until the presses roll. We want

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to present current and meaningful information. We don't try to be a newsflash, a bulletin, a letter or a telegram. And we want to be more than just another historical document. We want to be a highly visible, thought-provoking, competitive magazine!

That's right, a competitive magazine. Name recognition was the most important factor in changing our title. It sounds more modern, even more professional. And it's a name that advertisers and ad agencies can remember. Since ad revenue helps pay the bills, we want our advertisers to remember who we are. A politician who lacks name recognition can't hope to be elected; name recognition is half the battle in a competitive world.

We must also compete for *your* attention. That's one reason each issue is wrapped in a fresh, imaginative cover—a cover that always features the familiar logo that identifies the publication by name. Now our name is shorter than *U.S. News and World Report* but still longer than *TIME* or *JAMA*. You probably receive one of these magazines at your office—sometimes on the same day you receive our magazine. So, in effect, we're competing for your eye, right up there with the big boys.

INDIANA MEDICINE—it's a name we can all easily remember. Moreover, INDIANA MEDICINE is *your* magazine. You deserve our best efforts.

MUSEUM NOTES

CHARLES A. BONSETT, M.D., Indianapolis

DMUND L. VAN BUSKIRK, M.D. of Lafayette recently presented to the Museum his father's diploma from the Fort Wayne College of Medicine, shown in the illustration.

Dr. VanBuskirk, a 1933 graduate of 1.U. School of Medicine, has done extensive research on medical education in Fort Wayne. This was published in two issues of the Indiana Medical History Quarterly (Vol. III, No. 1, 1976 and Vol. III, No. 1a, 1977). The following information is abstracted from Dr. Buskirk's articles.

Fort Wayne had two proprietary medical schools—the Medical College of Fort Wayne (1876-1883) and the Fort Wayne College of Medicine (1879-1905). A photographic reproduction of a diploma from the first school was presented on this page (September 1979); and a photograph from the second school, from which the diploma shown on this page originated, appeared in the November 1976 issue.

Dr. VanBuskirk has a personal interest in these two schools because his father and his father's uncle were involved with their operation. The uncle, Aaron Elliot Van-Buskirk (1847-1904) was born in Carroll County, Ohio. His initial medical training was obtained by means of a preceptorship. He practiced briefly in Monroeville, Indiana after completing a year at the Medical Department of Wooster University at Cleveland, Ohio (1873-74). He received his medical degree from the Ohio Medical College in 1876. This was the year the Medical College of Fort Wayne came into existence. Dr. Aaron VanBuskirk was appointed to the faculty as a demonstrator of anatomy. He had a good reputation as a demonstrator and came to Fort Wayne, probably, through the influence of Dr. Christian Stemen and Dr. Henry Clark, both teachers at the Ohio Medical College who moved to Fort Wayne to become faculty members of the new school.

The Department of Anatomy of the new school was not without its problems. At that particular time in the state's history, bodies for dissection were obtained by one means or another from local graveyards.



Dr. Edmund M. VanBuskirk's 1902 diploma from the Fort Wayne College of Medicine.

"A real crisis for the Fort Wayne school occurred in 1877 when the community was scandalized by reports of grave robbing and disinterments of bodies for purposes of dissection. This was a common practice in the 18th and 19th centuries, and in this area bodies were often passed around among the Indiana medical colleges as well as schools in Cincinnati, Chicago, and Michigan to distract public attention from the desecration of burial sites. The Medical College of Fort Wayne was an ideal place for secretly receiving bodies from grave robbers. . . . It was common practice at this time for physicians to notify the pharmacist located in the medical school building when a suitable recently deceased body was to be buried; the pharmacist would then notify the 'resurrectionist.'

"The Allen County grand jury in 1876 had condemned the . . . (schools) dissecting room on the ground that it was used for depositing, concealing, and dissecting human bodies. The jury's report added that the alleged practice had produced great anxiety and indignation, especially among those who have recently lost rela-

tives and friends.

"Several incidents occurred which served to bring the wrath of the law down on the school. A young woman's body had been removed from the Lindenwood Cemetery, and this was recognized by a relative who happened to be enrolled in one of the medical dissection classes. In another instance the body of a very prominent citizen was stolen, causing the cemetery officials to post a reward for information leading to the arrest and prosecution of the offenders. The medical school was raided, and seven 'culprits' arrested. Public reaction was so intense that the trial was venued to Huntington County. Even there sentiment was so hostile that the defendants . . . required the sheriff's protection."

This event had its repercussions. Locally, it led to dissension causing a faculty split between those who would limit the school's program to a didactic experience, and those who felt that medical education could not progress without benefit of human dissection. The latter group broke away and formed the second school.

On a state-wide basis, this event influenced the Indiana General Assembly to establish the Anatomical Act of 1879, whereby human subjects could be lawfully obtained. This did not put an end to grave robbing, but it was a step in the right direction. Dr. Aaron VanBuskirk remained with the first school, but was on the faculty of the second by 1885, and teaching at various times anatomy, physiology, pathology, surgery, and diseases of the nervous system.

His nephew, Edmund M. VanBuskirk, M.D. (1876-1950) graduated from the Fort Wayne College of Medicine in 1902, and served on its faculty as Professor of Anatomy. He was a pioneer radiologist in Indiana, and in 1939 became the 90th president of the Indiana State Medical Association. His diploma will soon be placed in the amphitheater adjacent to the Harry Davis painting of the Fort Wayne College of Medicine.

We are very grateful to Dr. Edmund L. VanBuskirk for his father's diploma, and for his research and sustained interest in developing the Museum.

WHAT'S HEW?

Sandoz announces FDA approval for marketing Sandimmune ** (cyclosporine), which suppresses organ rejection without compromising the transplant recipient's infection-fighting defenses. Four years of clinical research has demonstrated a dramatic improvement in survival rates for kidney, liver and heart.

Searle announces the nationwide availability of Theo-24TM. This is the preparation of theophylline anhydrous, which is the first and only once-a-day theophylline dosage in the United States. Capsules of 100 mg, 200 mg or 300 mg are offered.

Technicare Ultrasound has introduced the MCC mechanical sector scanner. It is sophisticated, compact and mobile and offers high resolution. It features 64 gray shades for tissue definition.

General Electric has a new, mobile, fluoroscopic machine for use in surgical suites. It provides improved image performance in the thick parts of the body, such as lateral lumbar and lateral hip views. Called the C-arm PolarixTM, it is expected to be especially useful in chemonucleolysis. Also recommended for hip pinning, kidney stone removal, cardiac pacemaker implant and gall bladder surgery among many other surgical adaptations.

Thieme-Stratton has released Ambulatory Oxygen, a concise dissertation written for both the physician prescribing continuous oxygen and for the patient requiring home oxygen. Discussed are the COPD problem, history and scientific basis of oxygen therapy, travel and daily living, patient advice and instructions to patients on care of the equipment. Recommended for pulmonary medicine specialists, family practitioners, internists and COPD patients. 113 pages, \$3.75.

Monroe Systems for Business has a new, high-powered microcomputer, the System 2000, based on an advanced microprocessor by Intel. It offers faster 16-bit processing and modular configuration. It comes complete with two operating systems for use with a wide range of both 8-bit and 16-bit software packages.

Pluribus Press announces *PPOs: An Executive's Guide* by Samuel J. Tibbitts, CEO of the Lutheran Hospital Society of Southern California, and Allen J. Manzano, former president of Pacific Health Resources. The book discusses all aspects of Preferred Provider Organizations in a practical manner. 272 pages, \$32.95.

The Apex Medical Corporation has new measuring and dispensing devices. Improved medicine spoons, oral syringes and medicine droppers feature precise calibration markings in cubic centimeters marked in permanent black for easy reading. Household teaspoons when accurately measured have been found to vary from half a teaspoon to a teaspoon and a half. Modern active preparations require highly accurate dosage, in most cases, to avoid toxicity or to assure adequate dosage.

Kodak announces the Ektachem DT60, a new development from the hospital Ektachems, 100, 400, and 700. The DT60 is designed for use in the physician's office. It is desk-type size and will perform tests for blood samples for glucose, cholesterol, triglycerides, blood urea nitrogen and uric acid. An optional additive will measure sodium and potassium. Analysis is fast, and the patient may wait for the results. Small blood samples are sufficient—venipuncture is not necessary. A simple calibration procedure is required only four times a year.

Pluribus Press has published *Physician's Guide to DRGs*. It is edited by Robert J. Shakno, president, Hackensack, NJ, Medical Center. It considers all the changes which will be necessitated by the DRG program. Four of the nine contributors are physicians in New Jersey where DRGs have been in effect since 1980. 300 pages, \$24.95.

News of what is new in the medical supply industry is composed of abstracts from news releases by book publishers and manufacturers of pharmaceuticals, clinical laboratory supplies, instruments and surgical appliances. Each item is published as news and does not necessarily constitute an endorsement of a product or recommendation for its use by INDIANA MEDICINE or by the Indiana State Medical Association.

The D. Baker Jacobs Company has developed a comprehensive new guide and desk reference for using innovative media and marketing techniques to expand a professional practice. The manual is titled *Practice Development and Expansion Program*. The program is especially sensitive to the problems that medical professionals face concerning the delicate nature of marketing their services while maintaining their professional credibility. Jacobs calls this approach "discreet marketing."

Apex Medical Corporation announces improvements for its new 7-Day Pill Organizer. The device contains compartments for up to 4X daily for seven days. It tested at the Mayo Clinic with a record of 97% compliance, and has been recently improved by adding permanent hotstamping raised markings on each compartment. The cover is translucent and will indicate presence or absence of each medication at a glance.

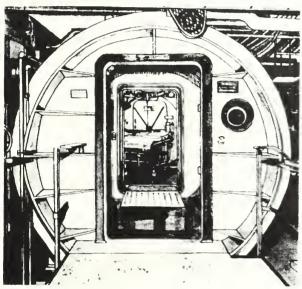
Code 3 Corporation announces the publication of its *DRGFINDER HAND-BOOK*, a manual for DRG assignment. The handbook uses the ICD-9-CM code as its indexing tool. The appropriate ICD-9 number directs the user to the needed DRG flow chart. Documentation is extensive. Major diagnostic categories, the complication-comorbidity section, and a complete procedure section are included.

Bio-environmental Systems has devised an infectious waste management system which employs a unique approach to containment, transportation, and treatment of infectious waste. The system consists of inter-related equipment which allows gathering and moving infectious waste without danger to personnel. The process results in sterilization of the hazardous material and eventual disposal.

Key Pharmaceuticals has the InspirEase, an easy-to-use, tone-emitting drug delivery system for asthmatics and others having difficulty using aerosol spray inhaler medications. InspirEase improves the efficiency of metered dose inhalers by eliminating the coordination difficulties some lung disease patients have with their use.

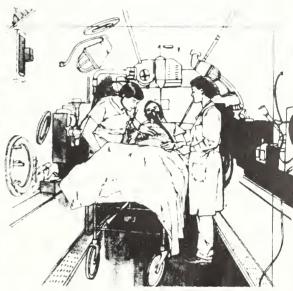
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Claude L. Zanetti, M.D. Director, Hyperbaric/Pulmonary Medicine

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FUTURE FILE

Ultrasound Imaging

"The Use of Diagnostic Ultrasound Imaging in Pregnancy" is the subject of a Consensus Development Conference to be sponsored by the National Institutes of Health Feb. 6, 7, and 8 in the Masur Auditorium in the N1H Clinical Center. CME credit is granted.

To register, write or phone Peter Murphy, Prospect Associates, 2115 E. Jefferson St., Suite 401, Rockville, Md. 20852—(301) 468-6555.

Electroconvulsive Therapy

"Electroconvulsive Therapy-1984 Update" will be the title of a conference conducted by The Center for Affective Disorders, University of Wisconsin. The dates will be April 6 and 7—the place Sheraton Inn and Conference Center, Madison, Wisc. Ten hours of Category I credit for the AMA is allowed. Fees are \$200 for physicians, nurses and health care professionals and \$100 for residents and trainees.

Correspondent is Dorothy B. Davidson, University of Wisconsin Hospital, Ave., Madison Highland 53792-(608) 263-6129.

Oncology Update

The sixth annual Oncology Update sponsored by Cedars Medical Center, Miami, Fla., will be held Feb. 17-18.

For information, contact Thelma MacGregor, Cedars Medical Center, 1400 N.W. 12th Ave., Miami, Fla. 33136—(305) 325-5511.



"Well, you told me, if I could get a better Money Management Plan, to by all means

The Journal of the American Medical Association publishes a list of CME courses for the United States twice yearly. The January listing features courses offered from March through August; the July listing features courses offered from September through February.

Pain in Cancer Patients

"Management and Theory of Pain in Cancer Patients" is the subject of a meeting at the Four Seasons Hotel in Houston, Texas on April 5 to 7. Sponsorship will be by The University of Texas M. D. Anderson Hospital and Tumor Institute and the National Pain Foundation. For information, contact the Office of Converence Services, Box 131, M. D. Anderson Hospital, 6723 Bertner Ave., Houston 77030—(713) 792-2222.

Emergency Medicine

The 1984 annual meeting of the University Association for Emergency Medicine will be held at the Hyatt Regency in Louisville May 23 to 26. Abstracts for scientific articles to be presented at the meeting will be accepted until Feb. 15. Mail five copies to UA/EM, 900 West Ottawa, Lansing, Mich. 48915.

Osteoporosis Meeting

"Osteoporosis" will be the subject of a National Institutes of Health Consensus Development Conference to be conducted April 2 to 4 in the Masur Auditorium at the NIH in Bethesda, Md.

Kidney Disease

"Analgesic-Associated Disease" is to be the subject of a National Institutes of Health Consensus Development Conference Feb. 26 to 29 at the Masur Auditorium, 9000 Rockville Pike, Bethesda, Md.

To register for the conference or obtain further information, write or call Mrs. Michele Dillon, 2115 E. Jefferson St., Suite 401, Rockville, Md. 20852—(201) 468-6555.

Radiology Meeting

"Nuclear Magnetic Resonance, Computed Tomography, and Digital Radiography" will be the title of a CME course conducted by the Radiology Department of the University of Wisconsin, School of Medicine May 15 to 18 at the Drake Hotel, Chicago, AMA Category 1 credit for 25 hours.

For full information, write or phone Sarah Z. Aslakson, 465B WARF Bldg., 610 Walnut St., Madison, Wisc. 53705—(608) 263-2856.

15th Pathology Congress

The International Academy of Pathology will conduct its XV International Congress at the Fontainebleau Hilton in Miami Beach Sept. 3 to 7.

Write the United States-Canadian Division of the Academy at 1003 Chafee Ave... Augusta, Ga. 30904 for full information.

Cytopathology Course

The Johns Hopkins Postgraduate Institute for Pathologists in Clinical Cytopathology will conduct its 25th course beginning in February. A loan set of slides with text will be sent to each participant for home study during February and March. This is followed by a two week In-Residence course in Baltimore March 25 to April 6. Application should be made before Jan. 31.

Write to John K. Frost, M.D., 604 Pathology Building, The Johns Hopkins Hospital, Baltimore 21205.



Look-Alike and Sound-Alike Drug Names

BENJAMIN TEPLITSKY, R. PH. Brooklyn, N.Y.

Look-alike and sound-alike drug names can be misinterpreted by a nurse reading doctors' orders or by a pharmacist compounding physicians' prescriptions. Such misunderstandings can result in the administration of a drug not intended by the prescriber. Awareness of such look-alike and sound-alike drug names can reduce potential errors.

PHYSOSTIGMINE

Category: Ophthalmic
Brand Name: Isopto Eserine, Alcon

Generic Name: Physostigmine
Dosage Forms: Ophthalmic solution

CEFOTAXIME

Category: Brand Name; Generic Name: Dosage Forms; Cephalosporin Claforan, Hoechst-Roussel Cefotaxime Sodium Powder for Injection

PYRIDOSTIGMINE

Cholinergic muscle stimulant Mestinon Bromide, Roche Regonol, Organon Pyridostigmine Bromide Tablets, Syrup, Injection, Sustained Release Tablets

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RONALD G. BLANKENBAKER, M.D. State Health Commissioner

New information from Office of the Commissioner Indiana State Board of Health 1330 W. Michigan St. Indianapolis, Ind. 46206 317-633-8400

PUBLIC HEALTH NOTES

The following article on registration and collection of records of vital events on the part of the Indiana State Board of Health serves as one illustration of the strong influence of those in the medical professions on public health in Indiana. In fact, had it not been for the farsighted and progressive leadership of the medical community during the early years, the Indiana State Board of Health might never have come into existence in 1881.

Registration of Vital Events

Central registration can be defined as the collection, processing, analysis and filing of the records of vital events for the state by one department of the state government. In its infancy, this procedure required a great amount of effort, including educational programs to encourage the completion and filing of birth certificates.

Physicians Saw the Need

Early attempts to initiate the standardized reporting of vital events were defeated in the Indiana legislature as some type of record was kept by physicians, clergymen, county clerks, funeral directors and sextons of cemeteries. The individualistic and stationary society of the 1850s to 1870s saw no need for these records except for personal use or a family record. Only a few progressive leaders of the medical profession could envision the benefit of having records to plan and document health policy.

Standardized Reporting

Following the appointment of the Indiana State Health Commission in 1878, additional attempts for the standardized reporting of vital events resulted in the establishment of the Indiana State Board of Health in 1881 with a major responsibility of the new agency being "... the general supervision of the interests of the health and life of the citizens of this State, and endeavor to make intelligent and

profitable use of the collected records of death and sickness among the people; . . ." (Acts of the Assembly, 1881, Indiana p. 37, Chapter XIX.)

The newly organized local health departments and health officers were delegated the responsibility of collecting birth and death records within their jurisdictions. Although this reporting was voluntary, the hard work and dedication of these health officers and the cooperative efforts of physicians and funeral directors resulted in the first organized, though incomplete, record of vital events.

Death Reports Mandated

Compulsory reporting of deaths became law in 1899 with the introduction of Burial Permits. Burial Permits were issued by the local health officer upon receipt of a completed Death Certificate and were mandatory for authorization to bury the deceased. As records became immediately available to show the registration of more than 90% of the deaths, Indiana was invited in 1900 to join the New England states, New York, New Jersey and Michigan as a charter member of the U.S. Death Registration Area. This early achievement is noteworthy, as some states were not admitted into the system until 1933.

As of Jan. 1, 1900, death certificates filed in the local health departments were forwarded to the Indiana State Board of Health on a monthly basis. Local records were maintained by transcribing facts from the certificates into ledgers. Starting Oct. 1, 1907, birth certificates were similarly abstracted locally and forwarded to the central depository. Certificates received from local health departments were tabulated for statistical study and stored in tied, unbound stacks in the basement of the State House.

Indiana was admitted into the U.S. Birth Registration Area in 1918 after

proving to inspectors that more than 90% of the births were being reported and existing records were being organized. This monumental task of organizing the records that had accumulated over the years had been undertaken by Herschel M. Wright, state registrar, on Sept. 1, 1917. Several years were required to complete binding and indexing the records so that a particular record could be located and retrieved as requests were received.

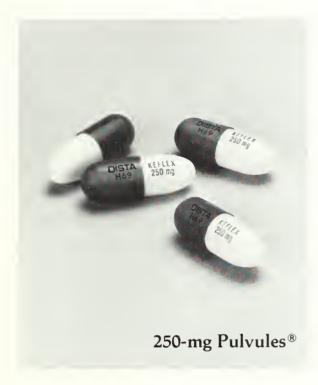
The availability of records was not widely recognized or appreciated until the start of World War II when individuals had to prove their age and citizenship for military service or employment in defense-related industries. The need for birth records was a reality that has increased dramatically over the years. Today's State Vital Records Office certifies about 55,000 records each year. Thousands of additional births and deaths are certified from the facts recorded in local health departments.

The original birth and death records kept in trust by the Indiana State Board of Health reflect the exact facts as recorded at the time of the event by the physician and/or others designated to do so. No other document created during the lifetime of an individual takes precedence over the original birth certificate in establishing the facts of birth.

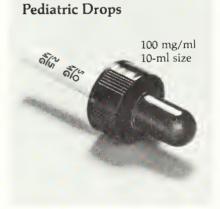
The end result of the efforts of members of the medical profession along with Herschel M. Wright and subsequent state registrars and vital records employees are properly prepared certifications of vital events that are accepted by governmental agencies and recognized in court as legal documents. The certification presented to a requestor can be relied upon to reflect the truthfulness and accuracy of the facts recorded.

The Indiana State Board of Health, thus, does its utmost to preserve and protect the integrity of all records entrusted to its care.

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Additional information available to the profession on request.

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Clinical Oncology Center Methodist Hospital of Indiana, Inc.

New information from Indiana Division American Cancer Society, Inc. 4755 Kingsway Dr., Suite 100 Indianapolis 46205

EVERY PHYSICIAN'S OFFICE— A CANCER DETECTION CENTER

CANCER CORNER

This is to inform you of the United Ostomy Association's Archie Vinitsky Scholarship for Enterostomal Therapy Education, now in its fifth year.

Brochures may be obtained by contacting the National Office in Los Angeles.

Nurses may submit applications before they have received acceptance into an approved training program. Proof of acceptance will be required prior to their actually receiving a scholarship award. Application deadline is April 30 of each calendar year.

For further information contact United Ostomy Association, 2001 W. Beverly Blvd., Los Angeles 90057—(213) 413-5510.

The American Cancer Society Fourth National Conference on Human Values and Cancer will be held March 15-17 at the New York Hilton, New York City.

Attendance will be open to all members and students of medical and related health professions as well as to interested lay persons concerned with health care delivery to cancer patients.

This continuing medical education activity meets the criteria for 15½ hours in Category 1 of the AMA Physician's Recognition Award. Accreditation for other health professionals is being sought.

All inquiries regarding this conference should be addressed to Diana J. Fink, M.D., American Cancer Society, National Conference on Human Values and Cancer, 777 Third Ave., New York, N.Y. 10017.

The following Nursing In-Service Education Program Guideline booklets are available:

#3317.07—Cancer in Extended Care

#3317.01—Cancer of the Breast

#3317.02—Cancer of the Colon and Rectum

#3317.05—Cancer of the Head and Neck

#3317.04—Cancer of the Lung

#3317.08—Nursing Management of Childhood Cancer

#3317.06—Radiation and Chemotherapy: Two Treatment Modalities for Cancer #3317.03—Uterine Cancer

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Acute Respiratory Failure

MITCHELL L. RHODES, M.D. Indianapolis

CUTE RESPIRATORY FAILURE, a complication of a variety of disease states, remains a significant cause of mortality in this country. Its recognition and appropriate management can significantly improve patient outcome. Acute respiratory failure has been defined as being present in a patient with an arterial pO2 of less than 50 mm Hg and/or a p CO_2 greater than 50 mm Hg. Many patients with chronic respiratory insufficiency may have blood gases worse than these figures at a time when they are stable and not facing the possibly fatal outcome implied by the term acute respiratory failure.

Acute respiratory failure is best defined as an acute, progressive deterioration in a patient's ventilatory status with falling oxygen levels with or without rising carbon dioxide levels, which will lead to a fatal outcome without appropriate medical intervention.

Respiration requires the coordinated function of the central nervous system, neuromuscular and chest wall components of the thorax, conducting airways, alveoli, and pulmonary circulation. *Table 1* lists the disease states or functional abnormalities that can lead to acute respiratory failure. The clinical manifestations in a patient with acute respiratory failure will depend on their underlying disease state, as well as the abnormalities of gas exchange that occur.

The initial manifestations of hypoxemia are often changes in cerebral function. Patients who are hypoxemic may appear intoxicated and show impaired judgment, loss of fine motor coordination, anxiety or disorientation, and may present as combatative or paranoid in their behavior. Changes in level of consciousness from somnolence to coma can occur.

The level of arterial pO₂ at which these mental changes occur is dependent on the rapidity of deterioration in gas exchange. Normally, marked impairment of mental function occurs at levels of arterial pO₂ below 35 mm Hg, but a patient with chronic hypoxemia who is slowly

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deteriorating may be awake and alert with a pO_2 in the low 20s. A rise in carbon dioxide tension is also associated with CNS changes, including headache, somnolence, and ultimately coma. Again, the rapidity of the rise will determine the severity of symptoms associated with hypercapnia

Initially, hypoxemia and hypercapnia can lead to tachycardia and a rise in blood pressure. As blood gases further deteriorate, bradycardia and hypotension might appear. Cyanosis is a late manifestation of hypoxemia, so that clinical evaluation alone is a very inaccurate way of estimating what a patient's gas exchange might be.

In a patient suspected of having acute respiratory failure by the presence of one of the conditions listed in *Table 1*, and manifesting possible CNS changes of hypoxia/hypercapnia with or without coexistent dyspnea, arterial blood gas levels must be drawn to establish the diagnosis of acute respiratory failure and subsequently to monitor the patient's course. Clinical monitoring alone or peripheral venous blood sampling is not an adequate substitute.

Management

Management of acute respiratory failure can be considered in two major categories. If the patient previously had normal lungs and normal gas exchange and acutely develops a problem leading to acute respiratory failure, such as drug overdose, Guillain-Barré syndrome, or adult respiratory distress syndrome, then intubation and mechanical ventilation supporting gas exchange, until the primary precipitating cause is reversed, is generally the treatment of choice.

In patients with Guillain-Barré syndrome, respiratory parameters such as vital capacity and blood gases should be monitored, once the diagnosis is established. Only a small percent of patients with Guillain-Barré syndrome will progress to the point where they develop acute respiratory failure and require intubation and mechanical ventilation.

Not all patients with a disease listed in *Table 1* will in fact develop acute

TABLE 1 Causes of Acute Respiratory Failure

Central causes

Drug overdose

Head trauma

Cerebral vascular accident

Central alveolar hypoventilation

Anesthesia

High flow oxygen in a hypercap-

Neuromuscular causes

Poliomyelitis

Myasthenia gravis

Guillain-Barré

Multiple sclerosis

Polymyositis

Myxedema

Tetanus

Botulism

Neuromuscular blockade (curari form drugs aminoglycoside

antibiotics

Amytrophic lateral sclerosis

Muscular dystrophy

Cervical Cordotomy

Chest wall and pleura

Kyphoscoliosis

Flail chest

Pleural effusion

Fibrothorax

Ankylosing spondylitis

Pneumothorax

Extreme obesity

Ascites

Abdominal binding or distention (postoperative)

Airwavs

Upper airway obstruction

Cystic fibrosis

Asthma

Emphysema

Chronic bronchitis

Lung Parenchyma and circulation

Interstitial pneumonitis and fibrosis

Surgical resection

Pulmonary edema

Adult respiratory distress syn-

drome

Pulmonary emboli

Pneumonia, diffuse

Atelectasis

respiratory failure. The list indicates those who are predisposed and emphasizes the need for monitoring those patients at risk.

The second major category of patients with acute respiratory failure in terms of management are those with underlying chronic respiratory insufficiency. These are patients who even when stable have abnormal arterial pO2's and pCO2's. This would include people with chronic bronchitis, emphysema, and others with chronic airways obstruction. An acute precipitating event can lead to progressive worsening in their blood gas status, the condition we defined as acute respiratory failure. In 80 to 90% of these patients, conservative or nonventilator management can be used unless the patient is apneic or comatose at the time the diagnosis of acute respiratory failure is made.

The mortality rate was 50% when mechanical ventilation was the major mode of therapy in acute respiratory failure superimposed on chronic respiratory insufficiency. This has decreased to 10-15% with conservative management. Those who require ventilators when first seen are frequently patients who have received excessive oxygen or inappropriate sedation prior to admission, which has markedly suppressed their level of consciousness.

Conservative Management

Severe hypoxemia is the life-threatening derangement that occurs in patients with acute respiratory failure. Arterial pO₂'s between 20-40 mm Hg are common at the time of admission if the patient is breathing room air. These levels lead to pulmonary vasoconstriction (cor pulmonale), impaired cardiac and cerebral function, and must be promptly corrected. The pO₂ should be raised to 50-65 mm Hg. The desired level will depend on many factors in a given patient.

Oxygen delivery is adversely affected by anemia, an impaired cardiac output, decreased perfusion that might be present with coronary artery or cerebral vascular disease, or increased oxygen demand as might be present with fever. Any of these adverse factors would necessitate aiming for the higher pO₂. Normally, respiratory drive is controlled by a feedback mechanism related to arterial pCO₂. This is normally maintained in a tight range of 38-42 mm Hg. In patients with chronic airways obstruction, hypercapnia may develop as an adaptive mechanism, allowing the patient to eliminate more carbon dioxide per breath with less work of breathing. In this situation, hypoxic drive becomes their primary stimulus. If excessive supplemental oxygen is given, raising the arterial pO₂ above 60 or 65, progressive hypoventilation may ensue.

Approximately 25 years ago, Dr. Campbell popularized the now proven concept that low flow oxygen in the form of I-2 liters of oxygen per minute by nasal cannula, or 24-28% oxygen by venturi mask, will reverse the severe hypoxemia in the vast majority of patients with chronic airways obstruction and acute respiratory failure without depressing their respiratory drive. Though some further increase in pCO₂ may occur, it is generally not progressive.

In the past, oxygen was given in an interrupted fashion to patients with chronic airways obstruction to prevent progressive hypercapnia. This technique is to be condemned and the patient must receive a continuous, noninterrupted flow of oxygen. The patient's blood gas response to supplemental oxygen, whether given by nasal prongs or venturi mask, must be checked with serial arterial blood gases to ensure that arterial pO₂ is adequate, and that the pCO₂, if it does increase, plateaus.

Aminophylline

Once life-threatening hypoxemia has been reversed and controlled, then efforts to reverse acute respiratory failure can be initiated. Increased airway resistance is an important component in the development of acute respiratory failure superimposed on chronic respiratory insufficiency. Intravenously administered aminophylline is a potent bronchodilator, improves cardiac function in chronic airways obstruction, and has an effect as a respiratory stimulant.

TABLE 2 IV Aminophylline Initial Infusion Rates in Acutely III Adult

Clinical Status	Infusion Rate					
	mg/kg/hr					
Asthma	0.9					
COPD uncomplica	ated					
men	0.6					
women	0.7					
Cardiac decompe	rdiac decompensation					
men	0.4					
women	0.6					
Liver dysfunction						
men	0.25					
women	0.4					

The goal is to achieve a serum level between $10\text{-}20\,\mu\text{g/ml}$. This is considered the therapeutic range, with significant side effects being seen at levels greater than $20\,\mu\text{g/ml}$. Up to 25% of patients may note nausea and vomiting at levels as low as $15\,\mu\text{g/ml}$, so dose targets must be individualized. Arrhythmias and central nervous system stimulation are common problems at serum levels greater than $30\,\mu\text{g/ml}$. Seizures have been reported with levels in the mid-20 range in patients with underlying CNS pathology.

If a patient has not been on oral aminophylline or theophylline preparation prior to admission for acute respiratory failure, a loading dose of 5-6 mg/kg (lean body weight) of aminophylline can be infused intravenously over a 30-minute period. If the patient has been chronically on an oral theophylline preparation, and serum levels are readily available, they should be measured. If the serum level is subtherapeutic, the loading dose can be calculated as 0.6 mg/kg for each $1 \mu \text{g/ml}$ increase in serum level desired.

For example, if a 70 kg patient enters with a serum theophylline level of 7 μ g/ml, his serum level can be raised to 15 μ g/cc by giving him 0.6 times 70 times 8, or 336 mg of aminophylline intravenously over a 30-minute period. Aminophylline should be maintained as a continuous IV drip. The dose per hour

must be adjusted to the patient's clinical status and monitored by periodic serum levels. Age, acute respiratory failure, cardiac dysfunction, and liver dysfunction all delay theophylline metabolism and prolong its half life. Lower doses are required under these circumstances to obtain therapeutic levels and avoid toxicity.

Table 2 gives reasonable starting infusion doses once the initial loading dose has been given. Serum levels should be obtained within 12 to 24 hours after starting the infusion and infusion rates adjusted accordingly. Rapid intravenous injection of aminophylline should be avoided since high peak levels can result, increasing the risk of toxicity. As the patient's clinical status changes, further dosage adjustments may be required. In an intensive care setting, many patients on IV aminophylline may not manifest nausea and vomiting as their initial sign of toxicity, and may present with significant cardiac arrhythmias or seizures.

Steroids

A recent study in Seattle showed that intravenous methylprednisolone given at a dose of 0.5 mg/kg every six hours for three days significantly accelerated the improvement in ventilation in a group of patients with chronic airway obstruction presenting with acute respiratory failure. These patients also were receiving IV aminophylline and controlled flow oxygen as described in the previous paragraphs.

A control group who received the aminophylline and oxygen without IV steroids did not show as rapid an improvement in their flow rates. There were no complictions attributed to the three-day use of IV methylprednisolone. The effectiveness of steroids in treating respiratory failure in asthmatics has long been established. Its use in chronic airway obstruction in acute respiratory failure now also seems justified.

Aerosolized Bronchodilators

If the patient is able to cooperate with inhalation therapy, the use of aerosolized bronchodilators such as metaproterenol solution, 0.2 cc in 2.5 cc of sterile saline delivered by compressed air nebulizer

every four to six hours may be helpful. If the patient is having marked respiratory distress, he may be unable to cooperate acutely with this form of therapy. If it is given, special efforts must be made to assure the patient does not become hypoxemic during treatment. Also, a patient having problems with increased secretions may have difficulty tolerating postural changes associated with percussion and postural drainage until his condition has stabilized.

IPPB in general is not recommended as a means of specific therapy or as a tool for delivering aerosolized bronchodilators in patients in this setting. There are problems related to abdominal distention, pneumothorax, and worsening airway resistance and hypoxemia with the use of IPPB. A recent cooperative study from the National Heart and Lung Institute in a thousand patients showed no advantage in the use of IPPB in patients with chronic airways obstruction over a simple compressed air nebulizer.

Antibiotics

Respiratory infection is one of the common precipitating factors for acute respiratory failure in patients with chronic airways obstruction. The patient may not be febrile, but if the sputum is purulent, and contains increased numbers of polys and bacteria on gram stain, antibiotic therapy should be initiated. If chest x-ray shows a pneumonic infiltrate and the patient became ill while at home, likely offending agents are streptococcus pneumonia or hemophilus influenza. If the patient had been in the hospital for several days prior to developing pneumonia, then the chance of the organism being gram-negative is increased. If the patient was observed to aspirate, then a combination of aerobic and anaerobic organisms are likely to be involved.

Antibiotic choices would depend on the knowledge of the sensitivity patterns for organisms in your local hospital and area. We have seen an increasing incidence of hemophilus influenza resistant to ampicillin. If the patient has evidence of acute bronchitis without a pneumonic infiltrate,

then a broad spectrum antibiotic, such as a member of the tetracycline, ampicillin, or erythromycin family could be started.

Cardiac Problems

With marked hypoxemia, the patient may develop pulmonary hypertension, cor pulmonale. The patient can present with cardiomegaly and edema. Correction of hypoxemia with controlled flow oxygen is the most effective approach for reversing this problem. IV aminophylline, as indicated, has been shown to improve both right and left ventricular function in patients with chronic airways obstruction and can further enhance diuresis. In the absence of evidence of left ventricular dysfunction, digitalis is not indicated, and digitalis toxicity is a common complicating feature in patients with chronic airways obstruction in acute respiratory failure.

Total body potassium depletion is frequently found in patients with chronic hypercapnia. This can be aggravated by the use of diuretics and corticosteroids. On admission, if the patient has respiratory acidosis, the serum potassium level may appear normal or even high. As the respiratory acidosis improves, serum potassium levels can fall precipitously and must be carefully monitored. If the patient's renal function and urine output are adequate, then appropriate levels of potassium chloride replacement should be given.

In general, if the patient's pH is above 7.2 on admission, the use of parenteral bicarbonate is not recommended. Patients with chronic airways obstruction and hypercapnia typically retain bicarbonate to compensate for their respiratory acidosis. If extra bicarbonate is administered, as the patient's clinical condition improves, the patient is prone to develop metabolic alkalosis which will depress respiration further.

Sedation

The injudicious use of narcotics, sedatives, and tranquilizers continues to be a frequent precipitating cause of acute respiratory failure in patients with chronic respiratory insufficiency. The use of these drugs in patients with acute respiratory

failure was one of the commonest management errors leading to death, as found in a recent hospital review.

The patients may appear anxious, restless, and tremulous, because of their hypoxemia and hypercapnia. Even small doses of sedative drugs in unstable patients in acute respiratory failure can lead to marked respiratory depression and require use of intubation, mechanical ventilation, with their attendant complications and increased mortality rate.

Preventing Medical Complications

A small percentage of patients, even if they are not given excessively high inspired levels of oxygen or narcotics or sedatives, will continue to deteriorate and require intubation and mechanical ventilation. The decision should be based on both a deteriorating mental status as well as progression of their blood gas abnormalities. If the patient has been chronically hypercapnic, his pCO₂ should not be brought down to a pCO₂ of 40, since he is likely to develop metabolic alkalosis, with seizures and cardiac arrhythmias.

Whether or not they are placed on a ventilator, patients in acute respiratory failure are at risk for GI bleeding. The incidence of stress ulcer bleeding can be reduced by a program of hourly antacids given through a nasogastric tube to maintain gastric pH between 5 and 6. If cimetidine is used, it must be remembered that this interferes with theophylline metabolism and can markedly increase serum theophylline levels. Another danger to the patient in intensive care with acute respiratory failure is development of thromboembolic disease. The use of subcutaneous heparin at a dose of 5,000 units every 12 hours has been shown to prophylactically reduce this risk.

Precipitating Factors

In each patient with an episode of acute respiratory failure, a search for a precipitating factor must be initiated with the hope of preventing future episodes. As indicated, respiratory infection, excessive use of oxygen in chronically hypercapnic patients, or inappropriate use of sedatives, tranquilizers, or narcotics can

be precipitating causes. Any factor which increases oxygen demand such as infection or fever, or factors which further compromise oxygen delivery such as anemia, can precipitate respiratory failure.

In recent years we have seen the increasing use of beta blocker drugs for treatment of hypertension, angina, and arrhythmias lead to acute respiratory failure in patients with chronic airways obstruction or other bronchospastic diseases. Even the use of so-called cardio-selective agents can lead to increased airway resistance. There have been an increasing number of reports of deterioration in respiratory function and acute respiratory failure with the use of Timolol eye drops for treatment of glaucoma.

Gastroesophageal reflux, by causing frank aspiration or reflex bronchospasm, has also been incriminated as a precipitating factor for deteriorating respiratory function in this group of patients. It is important to be aware of this possibility since some of the agents used in treating airways obstruction such as aminophylline and theophylline products, can aggravate gastroesophageal reflux. If the problem is documented, then intervention with elevation of the head of the bed, adequate use of antacid therapy, and initiation of a H-2 blocker, such as ranitidine, which does not interact with other drugs, would be appropriate.

Nutrition

There has been an increasing awareness of the importance of correcting nutritional deficiencies and maintaining adequate nutritional input in acutely ill patients. This has led to the frequent use of parenteral hyperalimentation. This can

be a useful adjunct in the patient with acute respiratory failure from any of the causes listed in *Table 1*. However, in giving parenteral nutrition, it must be remembered that carbon dioxide production can be increased by giving high carbohydrate loads intravenously, and this can complicate the recovery process of the patient with acute respiratory failure.

On a normal mixed diet, we produce 0.8 cc's of carbon dioxide for each cc of oxygen consumed. On a pure carbohydrate intake, 1 cc of carbon dioxide is produced for each 1 cc of oxygen consumed. If there is an excess of carbohydrate intake such that carbohydrate conversion to fat occurs, even greater levels of carbon dioxide production can occur for each cc of oxygen consumed. This may not be tolerated by the patient with a compromised ventilatory system and may lead to a rise in pCO2 and fall in pH. This complication has generally been reported when more than 2,000 calories per day were given in the form of intravenous carbohydrate.

Summary

Acute respiratory failure can occur in patients from any of the causes listed in *Table 1*. Changes in mentation out of proportion to the degree of dyspnea in any patient should raise the suspicion of acute respiratory failure. The diagnosis must be confirmed by arterial blood gas analysis and not by clinical impression alone.

If the patient has an acute problem superimposed on previously normal lungs, then endotracheal intubation and mechanical ventilation for support while the primary process is reversed is the management approach in general in this group of patients.

If acute respiratory failure is superimposed on chronic respiratory insufficiency such as chronic airways obstruction, then a conservative approach is most often possible and advantageous to the patient's survival. Immediate initiation of adequate, but not excessive, supplemental oxygen with use of intravenous aminophylline and steroids is the key to stabilization and reversal in acute respiratory failure in most of these patients. If another obvious precipitating cause such as pneumothorax or pulmonary embolus is present, these must be treated directly.

With attention to detail and management of associated cardiac and electrolyte problems, management of nutrition and prevention of further complications, the vast majority of these patients can be returned to their previous chronic stable state. A search for specific precipitating factors should be undertaken to reduce the incidence of future episodes.

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Emergency Airway Management: Part 1

Critical Care Medicine

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A review of the manual skills needed for non-invasive emergency airway management . . .

PPROXIMATELY 3,000 people die annually from airway obstruction due to a foreign body and an unknown number expire from a variety of other causes of airway occlusion such as trauma, tumors, or inflammatory lesions. Such asphyxiation may occur in any age range² and among hospitalized as well as non-hospitalized individuals.

A physician encountering such an individual must quickly recognize the inadequacy of ventilation and provide corrective therapy. Often this must be done without the equipment necessary for intubation, laryngoscopy, or formal tracheostomy or by physicians who do not customarily use such equipment. Therefore, in this review the recognition of airway obstruction and the manual skills necessary for non-invasive emergency airway management will be emphasized in Part 1 while Part 2 will discuss the use of more invasive techniques such as the esophageal obturator. translaryngeal ventilation, cricothyrotomy. That equipment which the physician not experienced in intubation or tracheostomy may wish to utilize or with which he or she may come into contact will be noted in both sections.

Recognition

The apneic patient requires both a patent airway and total support of respiration. The simultaneous occurrence of complete airway obstruction and apnea is recognized by the inability to force air into the lungs during resuscitation. Total airway occlusion in a patient who is not apneic is manifested by continued respiratory efforts usually evidenced by suprasternal, supraclavicular, intercostal, or abdominal retractions which are not accompanied by chest expansion or gas flow into the lungs.

The absence of gas flow is confirmed by failure to hear or feel gas movement through the nose, mouth or larynx. Partial obstruction by liquid such as sputum, saliva, blood, or vomitus characteristically produces a gurgling sound as air "percolates" through the excess fluid. Relaxation of the base of the tongue and other forms of soft tissue partial airway occlusion may cause snoring during inhalation and/or exhalation while inflammation or edema of the larynx may lead to the high-pitched "crowing" of inspiratory stridor as seen in croup.

Removal of Foreign Material

Mouth opening to gain access to the pharynx may be assisted by the cross-finger-technique when the masseter is partially relaxed. The thumb and second finger are placed against the opposite rows of teeth and the jaw forcibly separated. The fully relaxed mandible may be controlled by placing the thumb into the mouth over the tongue while the fingers grasp the chin and elevate the mandible.

When trismus is encountered the forefinger may be passed along the outer border of the teeth posteriorly to a position in the mouth behind the clenched teeth. Pressure exerted toward the front of the mouth may then force the jaw open enough to permit introduction of an oropharyngeal airway or mouth prop.

Removal of liquid from the posterior pharynx may be accomplished by placing the patient in a combination of the Trendelenberg and the decubitus, prone or supine positions, to allow gravity drainage by digitally removing the fluid with a handkerchief, etc.

Solid material lodged within the posterior pharynx or larynx may cause total obstruction with rapid asphyxiation.

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Inspection of the pharynx may be attempted with an available light source and digital removal of the object may be attempted but such efforts might also lead to further impaction.

Heimlich⁴ has suggested a series of maneuvers designed to abruptly increase distal airway pressure so as to expel the foreign body into the mouth. These socalled "thrusts" may be administered with the patient in a standing, sitting or supine position. The rescuer stands behind the upright patient and encircles the patient with his arms, one hand clasping the other fist anteriorly at a point above the patient's naval but below the rib cage. Rapid upward compressions are applied to the abdomen. Alternately the supine patient may be straddled by the rescuer and the abdomen quickly compressed from a similar point.

Lower and middle chest thrusts' have also been used with anterior pressure applied two or three finger-breadths above the xiphoid or over the sternum at the nipple line respectively. Controversy still surrounds the Heimlich technique as its efficacy has been supported mainly by anecdotal evidence although some quantification of expiratory gas flows during the thrusts is available.5-7 Rib fractures, emesis, and injury to abdominal viscera have been suggested as possible complications of the abdominal thrust' if the technique is improperly administered. Forceful blows to the midscapular region also have been suggested to produce elevations in intrathoracic pressure and to possibly be beneficial, 6,7 but at present the efficacy of this maneuver requires further clinical and laboratory evaluation.

In the treatment of obstruction in an awake patient a sequence of thrusts has been recommended until the patient becomes unconscious. Thereafter extraction of the foreign body may be tried by fingers, special pharyngeal forceps, etc. while attempts to ventilate the patient are continued.

At some point, if the above techniques have been unsuccessful in opening the airway, a cricothyrotomy of a translaryngeal ventilatory technique, to be discussed later, should be initiated.



FIGURE 1: Triple airway maneuver: backward head tilt, elevation of the mandible and mouth opening.

Triple Airway Maneuver

In an unconscious but spontaneously breathing patient without foreign body obstruction, muscular relaxation commonly produces obstruction within the hypopharynx when the head is in a neutral position. The airway may be opened by moderate extension of the neck, known as the backward head tilt.1 If this initial maneuver is unsuccessful. the mandible should be displaced forward by placing the fingers of one hand under each ascending ramus of the mandible and elevating the mandible away from the pharynx. In addition, the mouth may be opened by the rescuer's thumbs or forefingers if obstruction to gas flow persists (Figure 1).

At each step the physician should listen and observe for air movement to assess the success of therapy. Patients suspected of having sustained neck injury should not be subjected to the head tilt, but the mandible may be elevated from the pharynx and the mouth opened while the head is immobilized. The triple airway maneuver may also be used during mouth-to-mouth resuscitation to assure airway patency.

Oral and Naso-pharyngeal Airway Devices

Once established, the airway may be supported by one of several adjuncts. The

oropharyngeal airway is designed to be held forward by the teeth and to support the base of the tongue within its concave portion, so as to hold the tongue away from the glottic opening. If not properly positioned or of the wrong size, it may push the tongue over the glottis and cause obstruction, induce laryngospasm, or cause emesis.

Likewise, the nasopharyngeal airway may increase ventilation but may also traumatize the larynx, initiate spasm or stimulate the gag reflex. A modification of the oropharyngeal airway, the S-tube, allows airway support and mouth-to-airway positive pressure breathing but has the same limitations and has not found wide acceptance.

A limited amount of airway obstruction may be tolerated and adequate ventilation supplied if a positive pressure breathing technique or device is used to assist the patient who is spontaneously breathing or to totally ventilate the apneic patient. Mouth-to-mouth and mouth-tonose are the most readily accessible. The proper utilization of these techniques in both adult and pediatric patients should be well known to all physicians and is reviewed elsewhere.8 Mouth-to-artificialairway breathing may also be done with the oropharyngeal S-tube, esophageal obturator, cricothyrotome, endotracheal tube, etc.

Likewise, when available, a bag resuscitator may be used with a face mask and/or some of the other airway adjuncts noted above. Although of various designs, bag resuscitators are similar in application and are standardized to a common connector for use with other airway devices.

Ventilation with a face mask and bag resuscitator is dependent upon a patent airway and a closed seal between the patient's face and the mask. The tripleairway maneuver is performed and the bag-mask unit applied if two rescuers are available, or a single operator may use a modified technique to open the upper airway.

With the patient supine, the mask is placed over the face so that its lower rounded portion rests against the lower mandible in the groove formed by the chin and holds the mouth open. The mask is held and controlled with the thumb and forefinger of one hand while the 3rd, 4th and 5th finger of the same hand reach forward around the mask and grasp the anterior body of the mandible in the area of the mental protuberance and along its inferior border (*Figure 2*).

The mandible may then be elevated slightly and the neck extended if allowable to give a moderate head tilt. An oropharyngeal or nasopharyngeal airway may also be used to support the airway if necessary. The free hand is then used to compress the bag resuscitator. The efficiency of ventilation can be judged by ausculation for breath sounds, observing for chest expansion and by noting on a clear face mask if a moist mist covers the interior of the mask during exhalation. A small pocket face mask has also been designed for mouth-to-mask ventilation.

Thus, with a minimum amount of equipment a skilled physician may identify and treat the majority of patients with airway obstruction. In those cases where

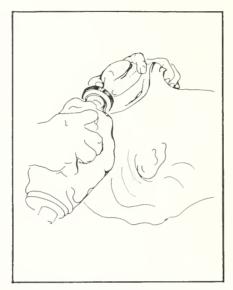


FIGURE 2: Proper positioning for bag mask ventilation.

severe obstruction persists despite the proper use of these non-invasive techniques, other methods which are to be reviewed in the second part of this discussion should be considered.

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Duplex Carotid Ultrasound

Preliminary Experience with a New Method of Screening for Extracranial Carotid Artery Disease

VALERIE P. JACKSON, M.D. PHILLIP J. BENDICK, Ph.D. GARY J. BECKER, M.D. Indianapolis

THEROSCLEROTIC DISEASE of the carotid system is a common condition, and its presence is highly correlated with the occurrence of stroke. The region of the carotid bifurcation is especially prone to development of atherosclerotic plaque. Until recent years, evaluation of the extracranial carotid arteries was limited to physical examination and angiography.

A noninvasive method is needed to help select those patients who might need angiography or subsequent surgery, and many techniques have been attempted. These include carotid phonoangiography (CPA), oculoplethysmography (OPG), periorbital Doppler, Doppler with spectral analysis, and, more recently, high resolution B-mode ultrasound (HRS). Each modality alone has been shown to have signficant limitations.1-4 The combination of high resolution ultrasound with pulsed Doppler and spectral analysis into a "duplex" unit is being examined with the goal of minimizing the disadvantages of each modality alone and improving diagnostic accuracy.

Materials and Methods

Duplex carotid ultrasound examinations were done on a Diasonics DS-10 dedicated peripheral vascular unit, using a 7.5 MHz high resolution real-time ultrasound transducer and a 3.0 MHz pulsed Doppler transducer housed in the same scanning probe. The system design allows for simultaneous HRS and Doppler examination of the vessel, assuring that blood flow patterns are measured from a precise area of anatomic interest, which is very important for accurate evaluation of the artery.

The patient is examined in the supine position with the neck extended and turned away from the side being examined. The carotid artery is first imaged both transversely and longitudinally from as near the origin of the common carotid to as far above its bifurcation as possible. From transverse scans, the system is able to compute a percent area reduction for stenosis. While this is ultimately the most accurate method of determination of degree of stenosis, it cannot be correlated to a percent stenosis measured from conventional angiography or digital subtraction angiography (DSA). Therefore, a percent diameter stenosis based on either longitudinal or transverse scans is calculated for comparison with contrast studies.

Real-time ultrasound examination of the common carotid artery (CCA), internal carotid artery (ICA), and external carotid artery (ECA) is done (Fig. 1) and then these vessels are examined in the "mixed mode" combining pulsed Doppler with HRS (Fig. 2). Doppler samples are obtained in the CCA, ICA, ECA, and at any areas of stenosis. Each vessel has a unique, characteristic Doppler signal which helps to identify the branch being examined. Doppler signal aberrations are found in areas of stenosis and atherosclerotic irregularity,5 and may provide evidence of hemodynamically significant lesions out of the field of view or which had been previously overlooked by HRS alone.

Duplex examinations were evaluated and a report written before results of other studies were revealed. All studies were categorized as to the degree of diameter stenosis present: Normal = no

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evidence of atherosclerotic disease; Mild = 1%-29% stenosis; Moderate = 30%-69% stenosis; Severe = 70%-99% stenosis; Occlusion = absence of flow.

Results

In our first six months experience, 110 patients were examined in a blind fashion, without prior knowledge of the patient's clinical history or results of any other noninvasive vascular laboratory test or contrast examinations. The duplex examinations of nine patients (8%) were uninterpretable because of technical difficulties. Correlation with arteriography or intravenous DSA was available for 190 vessels; in most cases the contrast examination was intravenous DSA. These results are shown in the *Table*.

Absolute correlation between duplex examination and DSA was found in 151/190 vessels (79.5%). An additional 34 vessels (17.9%) had good correlation, with severity of disease within one category of that seen on contrast study. In only 5/190 patients (2.6%) was there poor correlation. Our results show no significant difference in error rates for severe or mild disease. Most of the cases with poor agreement were in the first few weeks we had the equipment.

We have had two false-negatives, one with complete occlusion of the ICA and collateral flow via the ECA, in which case the ECA was mistaken for the ICA. The second case was originally called normal, but in retrospect, the scans showed a moderately stenotic plaque in the bifurcation. False-positives primarily involved misinterpretation of turbulent flow in the bifurcation region as abnormal in the absence of visible plaque. We now recognize this as a normal phenomenon and are careful to sample in this region only when a plaque is seen.

Discussion

Duplex carotid sonography has many advantages. It is without known risk to the patient as there is no ionizing radiation or injection of contrast involved. There have been no reported cases of stroke or TIA during the examination. It is very comfortable for the patient and is low in cost at most institutions. The

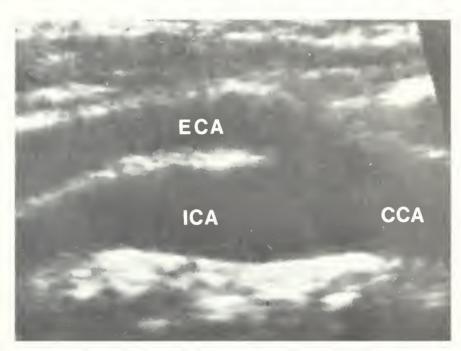


FIGURE 1: Longitudinal sonogram showing a normal common carotid artery (CCA), internal carotid artery (ICA), and external carotid artery (ECA).

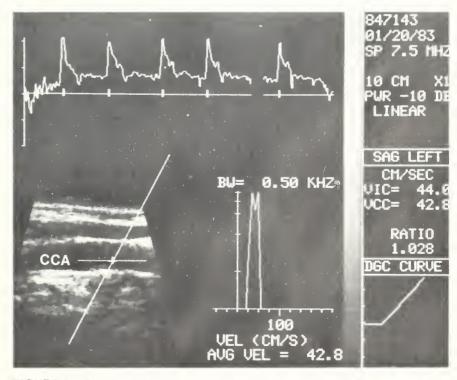


FIGURE 2: Longitudinal examination of a normal common carotid artery (CCA) in the "duplex" mode. The Doppler wave form tracing above occurs simultaneously with the real-time sonogram in the lower left corner. In the lower right corner is a histogram generated from the Doppler data of four cardiac cycles.

TABLE
Correlation of Duplex Sonography with Contrast Studies (Vessels)
Angiography or Intravenous DSA

		Normal	Mild	Moderate	Severe	Occlusion
	Normal	53	9	1	0	1
	Mild	10	29	3	0	0
Duplex	Moderate	0	6	30	3	0
	Severe	2	0	2	23	0
	Occlusion	0	1	0	1	16

combination of HRS and Doppler minimizes the problems of each modality alone, making it a highly accurate screening method. In fact, some workers feel that duplex sonography may be more accurate than contrast studies, especially in cases with mild stenosis or small lesions. This may be particularly true when comparing duplex sonography to intravenous DSA where often only one good view of a bifurcation is obtained and image resolution is less than for conventional biplane angiography.

The examination does have several disadvantages. The technique is difficult to master, with examiner inexperience one of the most frequent causes of error. The examination is degraded by excessive pa-

tient motion, a limitation for DSA as well. Patients with high carotid bifurcations, deep, tortuous, or acutely angled vessels may have difficult studies. With present equipment, it is difficult to diagnose ulcerated plaques by this technique. Some workers have had problems distinguishing between high grade stenosis⁶ and complete occlusion of a vessel, though we have not had this difficulty.

Conclusion

Duplex carotid sonography, even in our early experience, has been shown to be highly accurate in the diagnosis of atherosclerotic disease of the extracranial carotid arteries. We feel it will replace

traditional noninvasive vascular laboratory tests for screening and follow-up of patients with suspected vascular disease. While patients with definite strokes or TIAs who are surgical candidates should go directly to DSA or conventional angiography, duplex sonography is an appropriate screening examination for the many patients whose clinical diagnosis is less certain.

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Angiolymphoid Hyperplasia with Eosinophilia

YENSHEN HSUEH, M.D. SWEI H. TSUNG, M.D. Gary

Abstract

A case of angiolymphoid hyperplasia with eosinophilia (AHE) of the lower extremities is reported. In addition to the characteristic histologic features, a foreign body was found at the periphery of the lesion. The possible link of this material to AHE is discussed.

NGIOLYMPHOID HYPERPLASIA with eosinophilia (AHE) is a rare entity, characterized clinically by solitary or multiple subcutaneous or dermal nodules, localized mainly to the scalp and face. Kimura, et al' in 1948 first described this disease and coined the term "eosinophilic lymphoid granuloma." Kawada, et al in 19662 preferred to use "eosinophilic term phofolliculosis." Wells and Whimster in 19683 first reported it in the English literature using the term "subcutaneous angiolymphoid hyperplasia with eosinophilia." They were the first to note peripheral eosinophilia. There have been reports of subsequent cases by several authors with the plethora of terminology.4-9 The histology includes prominent endothelial cell proliferation, infiltration with eosinophils, reticulin formation, lymphoreticular hyperplasia, which as the lesion ages, often shows lymphoid follicles. Many of the endothelial cells contain cytoplasmic vacuoles. We herein describe an additional case.

Case Report

A 47-year-old Caucasian male physician noticed multiple, firm, movable nodules in both lower extremities with intense itching and gradual increase in size over a period of several years. A complete physical examination showed no evidence of hepatosplenomegaly or lymphadenopathy. A chest x-ray film was normal. Multiple analyses of serum yielded negative results with a normal complete blood count except for an eosinophilia of 11% with a total white blood count of 7,700/cu.mm. The largest nodule, measuring 3.5 x 1.5 cm. at the right ankle, was excised. He then received multiple intradermal steroid injections to the remaining nodules. All the skin lesions regressed over a period of six months and his eosinophils in the peripheral blood returned to the normal

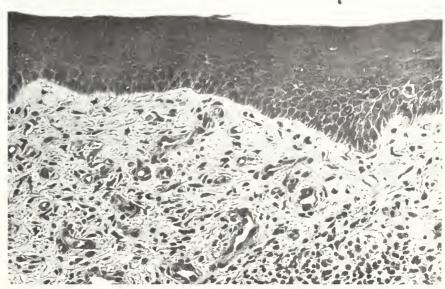


FIGURE 1: Marked proliferation of vascular channels lined by swollen endothelial cells (Hematoxylin-eosin stain x150).

From the Dept. of Pathology, Methodist Hospital, 600 Grant St., Gary, Ind. 46402. range. There was no recurrence after five years follow-up.

The resected nodule was fleshy and homogeneous and was located in the dermis and subcutaneous fat. Microscopically, the predominant histologic element was proliferation of vascular channels, which were lined by swollen endothelial cells (*Fig. 1*). Another component in the histologic picture was an extensive cellular infiltrate of lymphocytes, histiocytes, numerous eosinophils and occasional plasma cells (*Fig. 2*). Special stains for fungi, acid-fast bacilli and spirochetes were all negative. Of special interest was a parasitic foreign body noted at the periphery of the lesion (*Fig. 3*).

Discussion

The pathogenesis of AHE remains in doubt. Grimwood and Swinehart7 found granular deposits of immunoglobulin and complement associated with the vessels in AHE and suggested that it is an inflammatory reactive lesion, possibly secondary to immunologic injury. Their patients had cryoglobulinemia, which may have accounted for these deposits. However, Wright, et al10 found no such deposits in their reported case. Several Japanese authors have suspected an infectious origin, but intracutaneous injection of various parasite homogenates has failed to elicit a reaction in these patients. 11,12 and careful search has not turned up any bacteria, parasites, or fungi in the tissue. 13

Our patient is unique in that a parasitic foreign body was found in the dermis adjacent to the lesion. It is quite possible that, in this case, this foreign body arouses the vascular reactive process. The remaining nodules were not removed. It is not known whether they contained foreign body or not. The nature of this foreign body cannot be identified, although it resembles a parasite in some way. We strongly favor the theory that AHE is an inflammatory vascular reaction process, rather than a neoplastic disease. Foreign body may be one of the stimuli which can initiate the reactive process. Takenaka, et al13 showed raised levels of serum IgE and IgE antibodies to Candida antigens in patients with

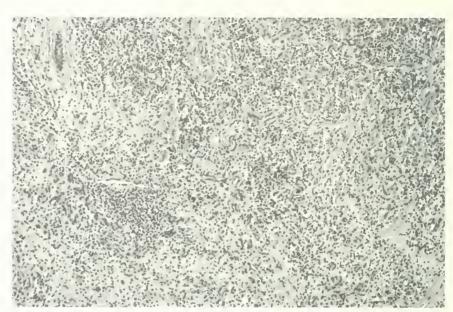


FIGURE 2: Extensive cellular infiltrate of lymphocytes, histiocytes, eosinophils and occasional plasma cells (Hematoxylin-eosin stain x100).

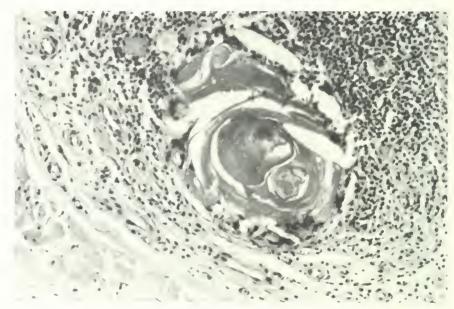


FIGURE 3: A parasite-like material at the periphery of the lesion (PAS stain x150).

Kimura's disease and suggested that this might represent a hypersensitivity reaction to the fungus. The significance of these observations in relationship to the pathogenesis of AHE is unclear. The serum level of IgE was not assayed in our patient.

In the literature, AHE was most frequently found in the preauricular area

and face, although it has been reported in many other areas such as hands,⁷ penis,¹⁴ bone,⁹ and knee.⁸ We are not aware of any previous reports of AHE involving both lower legs. Treatment in most reported cases has been either external irradiation or glucocorticoids. We experienced a very good response with intradermal steroid injections.

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January 1984 Indiana Medicine 27

LETTERS

Parents' Right to Decide

The Indiana Supreme Court recently ruled that the parents of retarded adolescents have a right to seek medical help in curbing their fertility. The Legal Services Organization and Indiana Civil Liberties Union had challenged that right.

Three years ago, LSO filed suit against the parents of a retarded girl to prevent a hysterectomy operation. They argued that the girl was unable to give consent, and the parents had no legal right to consent for her; therefore, nothing could be

Our nonprofit association took up the legal battle on behalf of the parents, and in the lower court, Judge Boring ruled against LSO, denying the requested injunction to prevent the operation. The mills of the gods and of the courts grind slowly; in January 1983, two of three appeals-court judges ruled that we would be violating the girl's constitutional right to have babies if we did the operation.

The Indiana Supreme Court reversed the appeals ruling, agreeing with the minority opinion of the appeals court that the parents have a right to protect their retarded youngsters from the effects of their own fertility.

This is a very sensible ruling. When a retarded teenager has a baby, her mother becomes the baby's real mother—an unfair burden upon her. If she dies or is unable to handle the additional care, the taxpayers must accept the problem. Care for retarded persons in institutions—of which we have far too few—can cost up to \$30,000 per year.

It is impossible to ask the courts to rule on every retarded person. This one case cost more than \$30,000 for legal and court charges, and three years of time.

No one else in our society is so close to the problems of the retarded as parents. It is high time that we respect their right to decide.

> H.C. Moss, M.D. President Voluntary Sterilization Association of Indiana

The Emergency Room at the Hospital in Middletown

Here's a place where life's disasters come. Where words and guts spill out. And young and old may come to sputter out their last. A place for simple wounds from simple deeds. And grievous cuts mischievously done. And bodies lacerated by the god of speed. And humorous injuries, like fish hook in fundament. A place for horrid lamentations and voices raised in fear. A place for honest horror and dire events, and ailments sickening to see. A place for breath almost gone, and breath thought gone but not. A place for fools and cowards and heroes too.

A place for ones with minds gone from drug.

And ones with minds wandering from erring nerve or vessel pulses. A place for abject craven terror, and for resignation in adversity. A place rarely quiet, unless fate suspends all incidents.

The pageant of our lives and deaths in Middletown-Philip Ball, M.D.,

A Salty Response from the Salt Institute

A recent short item in the September 1983 issue, "Salt Is the Culprit," citing a University of Illinois study, made a dangerous and misleading assumption.

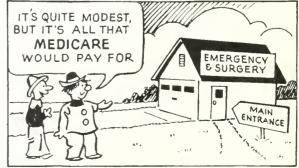
The statement was, "Almost all hypertension is preventable. All you have to do to avoid it is LIMIT SALT IN-TAKE." I doubt that the statement was made by those in the Illinois study; it was apparent that the statement was an editorial comment. . . .

The statement is absolutely irresponsible, especially for a medical journal. Any physician should know that merely limiting salt intake is not going to prevent hypertension. The sad part of it is that the excessive emphasis on the sodium issue has been giving consumers a false sense of security, leading them to believe just what that irresponsible statement claims. There are many factors involved in hypertension, not the least of them heredity, obesity, calcium, potassium and magnesium intake, stress, lack of exercise and others.

We think you should retract the dangerous and misleading statement and explain that sodium reduction is only one means of controlling existing hypertension in some people.

> H. Lincoln Harner Director, Public Relations Salt Institute Alexandria, Va.





-Cartoon idea by L. A. Arata, M.D.

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EDITORIALS

Health Care Survey

- A definite majority of Americans interviewed agree that "fundamental changes are needed to make our health care system work better."
- The survey showed that "the American public will accept a wide variety of measures intended to control the soaring cost of health care."
- Sixty-five per cent felt it would be acceptable to require employees to pay part of their health insurance premiums.
- Fifty-eight per cent would accept higher deductibles than they now have in their insurance policies.
- Fifty-two per cent find it acceptable to require patients to pay a larger share of their medical expenses covered by health insurance.

These are some of the results of a recent poll taken by Louis Harris and Associates for The Equitable Life Assurance Society of the U.S. An overwhelming majority of the health insurance executives and the corporate benefits officers, included in the study, were in agreement with the overall opinions.

The survey covered a national cross section of 1,501 adults, a national sample of 100 physician leaders, a sample of 100 hospital administrators, together with 50 senior health insurance executives and 250 corporate benefits officers, all selected from the largest hospitals and corporations.

Options most acceptable to the public included second opinions for non-emergency surgery, encouragement for minor tests and minor surgery as an outpatient, insurance plans to encourage the care of the chronically ill at home, and insurance plans that offer incentives to people who follow good health practices.

"One clear message that emerges from the Equitable Health Care Survey is that most Americans are ready to accept a remarkably broad range of cost containment proposals." Of 19 different measures designed to contain health care costs, 17 were found to be very or somewhat acceptable to the majority.

Other cost containments suggested were (1) to discourage hospitals from having expensive equipment and specialists if they were available at a nearby hospital; (2) use of nurse practitioners, midwives

and physicians' assistants; and (3) the health maintenance organization concept.

Hospital administrators favored outpatient services whenever possible. Whereas the administrators thought the use of new and more expensive treatments and equipment was the main reason for high cost, the public thought the escalation was due to "the increasing cost of the same services."

Corporate benefits officers recommended that employees pay a part of their health premiums. They also favored utilization review by third-party payers to discourage expensive and/or unnecessary procedures.

Insurance executives and benefits officers also produced an opinion which is difficult to classify. Both groups strongly disapprove of doctors and hospitals charging higher fees for patients who pay their own bills or are covered by private insurance than for Medicare and Medicaid patients. They, evidently, do not realize that Medicare and Medicaid are responsible for the different cost levels because the government programs pay much less than the actual cost of medical care.

All respondents agreed that the success of cost containment endeavors would depend to a large degree on public education.

The need for public education is evident from the fact that a small group (11%) of the public voted for "more or better care for the elderly, more inclusive Medicare."

Health maintenance and preventive care are popular items. "Majorities of the American public and in all the professional groups (76% to 82%) agree that insurance plans that offer incentives to people who practice health and safety

procedures are likely to be effective." Even greater majorities ($79\%_0$ to $97\%_0$) find this proposal acceptable.

This offers some hope of success since it is well known that the reasonable adherence to proper lifestyles by the American population would result in reducing the national medical care bill by 50%.

Proper Lifestyles

Charles R. Russell, vice president of American Medical International, one of the nation's leading investor-owned hospital companies, addressed the Indiana State Chamber of Commerce recently. Russell noted that nearly 40% of the nation's health-care expenditures are attributable to unhealthy lifestyles.

He recommended a more determined effort at education and prevention.

This is a subject that should be discussed more often and very persistently.

Dr. Cloud, past president of the American Medical Association, has studied government reports on the cost of medical care in the United States.

His conclusion from the study was that: "In the United States, if no one used tobacco, if everyone did not use alcohol or used it in moderation, if everyone ate properly, maintained a near normal weight, and exercised regularly, and if everyone drove their automobiles with proper care the medical care bill would be half what it is now."

Proper lifestyles not only save a lot of money, but also contribute to elimination of unnecessary deaths and improve the efficiency and constancy of the working force.

Big bargain, sure enough.



Do you have a new colleague who doesn't belong to the Indiana State Medical Association? Call Mrs. Rosanna Iler at (317) 925-7545 or 800-382-1721 (WATS) for a free membership kit.

Why Indiana Physicians Should Own PICI

HE PROGRESS of medical malpractice differs across the United States. The variations between states are, no doubt, partially due to differing state statutes on the subject.

Indiana was one of the first to enact modern legislation. Many states passed similar laws, although usually with changes: in some jurisdictions minor changes, and in others major changes.

Appeals to constitutionality have been successful in setting aside some of the provisions in other states. However, in Indiana, such appeals have failed and courts and the legal profession have become accustomed to administration of the medical malpractice statute and to its special considerations.

Exact appraisals of the malpractice situation in each of the states is not possible or necessary. However, as a general statement, Indiana is near the middle; several places have more troubles and some have less.

The Indiana law has been in force since 1975. Since then the number of suits filed has increased. It started with one suit the first year and last year the new-suit count was up to 554. The suit count for 1983 up to Nov. 22 was 556. It is difficult, at this writing, to predict the total count for 1983 since it is customary to register suits at an increased rate as the year ends. If filing occurs at an ordinary seasonal rate during the last month of 1983 the percent of increase over 1982 will be thirteen.

The Patients' Compensation Fund (PCF) is receiving some well-deserved attention from its administrators. This is the fund which pays that part of a judgment which is in excess of \$100,000. Standard malpractice insurance pays any judgment up to \$100,000—the PCF is obligated for the payments between \$100,000 and \$500,000, if the tab exceeds \$100,000.

Two factors affect the soundness of the PCF. One relates to the total number of suits which result in a judgment. Factor two is the amount of the judgment which, by the way, tends always to approach the \$500,000 mark. Both factors are currently on the increase.

Judgments are now, in recent years,

averaging a little over \$300,000. Twenty-four claims which were adjudicated in 1982 were paid in January 1983 to the total tune of \$7.2 million.

Since the PCF acquires its assets exclusively from the surcharge on malpractice insurance premiums, together with a little interest paid on investment accounts, any tendency to financial anemia is to be counteracted in a timely manner by raising the surcharge.

The surcharge has been increased once, above the amount at which the fund started, and it is now exhibiting signs to indicate that a larger surcharge is needed.

Of course, since the surcharge fund cares for judgments between \$100,000 and \$500,000, physicians get more for their surcharge dollar than they do for the basic malpractice premium dollar. This is because there are some judgments at or below \$100,000, and a part of the premium dollar pays for defense of the case and for educational and preventive activities.

And, here is where the Physicians Insurance Company of Indiana (PICI) comes in. The company was organized by Indiana physicians with the aid and encouragement of the medical profession of Ohio, Kentucky and Michigan. It is enjoying a splendid start—something which its originators are also enjoying.

In September just past company assets were standing at \$3,518,158, a gain of 17.2% since inception. Policies are being written at an increasing rate. There have been 235 new insureds in 1983 up to Oct. 1. Thirty five per cent of the 235 physicians were insured during the 90-day period this summer.

ISMA has an interest in PIC1, which will increase as more and more ISMA members purchase PICI stock. Indiana physicians are purchasing malpractice policies from PIC1 at a very satisfactory rate and are being urged to buy stock in the company. It is a good investment and each share held by an ISMA member increases the control and inherent advantages of ownership in our own malpractice entity.

Indiana control of PIC1 gives ISMA access to claims and financial data. In ad-

dition ISMA members participate in setting the policies of the claims committee and the underwriting committee. NUFF SED!

ISMA and its insurance advisors are vitally interested in preserving the present limit (cap) on financial judgments. Plaintiffs' lawyers want it higher but practicing physicians favor the present limit. A higher limit would mean higher insurance premiums and consequently higher professional fees to finance the insurance premiums.

Plaintiffs' lawyers are also interested in statutory change to raise their share of a contingency case to $66\frac{1}{2}$ %.

Comparative Fault is a new legal theory which, if approved, would allow and encourage a jury to determine, percentagewise, the varying degree of fault imposed on two or more defendants in cases in which more than one defendant is found at fault. This is a theory which will be studied carefully to determine its effect in malpractice cases.

ISMA constantly studies the malpractice law—its function, its successes and failures—to provide recommendations for modification and modernization of the law. The Patients' Compensation Fund will require an increased supply of assets to assure timely discharge of the claims against it. Also, ISMA is studying the question of allowing payment from the PCF on an annuity basis.

There is the possibility of an ISMA recommendation to the legislature to improve clauses in the law which will allow the Insurance Commissioner to operate a better claims management program.

The State Association has a large and beneficial involvement in the malpractice situation. Constant study of the law and its effectiveness, careful consideration of the merits of legal modifications, and investigations of the functions of the law in regard to protection of the defendant, proper redress for the patient and counsel are producing a system of justice for all and recompense for those injured.

Ownership of PICI by Hoosier physicians should be as complete as possible to reinforce the control by ISMA which is so necessary to this judicial process.

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References
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BRIEF SUMMARY
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in applied.

Intrinied tudie, in mal numbers of patients suggest concilinations of PRDCARD A and beta brinking agent, may be beneficial in patients with chronic stable angina, but available information in at militudine in the predict with confidence the effects of concurrent treatment especially in patient, with company sed left ventricular function or cardiac conduction abnormalities. When in reducing such micromatint therapy rate must be taken to monitor blood pressure closely since every hypotension can occur from the combined effects of the drugs. See Warnings is CONTRAINDICATIONS. Kerwin hypotensensitivity reaction to PRDCARDIA.

WARNINGS: Excessive Hypotension: Although in most patients, the hypotensive effect of PROCARDIA is modest and well tolerated occasional patients have had excessive and poorly followed the patients on these responses have usually occurred during initial tritation or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta blockers.

subsequent upward dosage adjustment, and may be more oxery in patients on concomiant beta bioxers. Severe hypotens on and or increased fluid volume requirements have been reported in patients. Severe hypotens on and or increased fluid volume requirements have been reported in patients receiving PROCARDIA and a beta blocking again who underwent coronary artery bypass underly using high dose fentanyl and a beta blocker but the possibility that it may occur with PROCARDIA alone, with low doses of tentanyl in other surgical procedures or with other narcotic analgesics rained be ruled out. In PROCARDIA treated patients where surgery using high dose fentanyl anesthesia is contemplated, the physician should be aware of these potential problems and it the patient's condition permits, sufficient time lat least 36 hours i should be allowed for PROCARDIA to be washed out of the body prior to surgery.

Increased Angina. Occasional patients have developed well documented increased frequency duration in severity of angina on starting PROCARDIA or at the time of dosage increases. The mechanism of this response is not established but could result from decreased coronary perfusion associated with decreased diastolic pressure with increased heart rate. Or from increased demand resulting from increased heart rate alone.

Beta Blocker Withdrawal. Patients recently withdrawn from beta blockers may develop a withdrawal syndrome with increased angina, probably related to increased sensitivity to catechol.

Beta Blocker Willingrawal Patients Tecentry windows in the bear blocker and you characteristic details and the state of th PROCABBILA

Congestive Heart Failure | Rarely | patients | usually receiving a beta blocker have developed heart failure after beginning PROCARDIA | Patients with tight aortic stenosis may be at greater risk for

taiture after beginning PROCARDIA. Patients with light aortic stenosis may be at greater risk for such an event.

PRECAUTIONS

General Hypotension Because PROCARDIA decreases peripheral vascular resistance, careful monitoring of blind pressure during the initial administration and fitration in PROCARDIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. See Warnings.)

Peripheral edema. Mid to moderate peripheral edema. Typically associated with arterial vasoilation and not due to left ventricular dysfunction, occurs in about one in ten patients treated with PROCARDIA. This edema occurs primarily in the lower extremities and usually responds to diuretic herapy. With patients whose angina is complicated by congestive heart failure care should be taken to didterentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug interactions. Beta adrenergic block in agents. (See Indications and Warnings.) Experience over 1400 patients in a non-comparative coincal trial has shown that concomitant administration of PROCARDIA and beta-blocking agents is usually well tolerated. But there have been occasional iterature reports suggesting that the combination may increase the likelihood of congestive heart aure, severe hypotension or exacerbation of angina.

I ong acting intrates. PROCARDIA may be sately co-administered with nitrates, but there have been locating intrates. PROCARDIA may be sately co-administered with nitrates, but there have been locating intrates. PROCARDIA may be sately co-administered with nitrates but there have been inclined study of over two hundred patients, with congestive heart failure during which digoxin blood levels in mine of twelve formal virunteers. The average increase was 45%. Another investigator found no increase in digoxin levels in finiteen patients with coronary artery disease. In an uncontrolled study of over two hundred patients, with congestive heart failure durin

Carcinogenesis implagments impairment of retriny vited given to aris pilot orbandy of the prevaled reduced fertility at a dose approximately 30 times the maximum recommended human dose. Pregnancy Category C. Please see full prescribing information with reference to teratogenicity in rats embryotoxicity in rats. mice and rabbits, and abnormalities in monkeys.

ADVERSE REACTIONS. The most common adverse events include dizziness or light-headedness per phiral adema nausea weakness, headache and flushing each occurring in about 10% of patients. Transient hypotension in about 5% palpitation in about 2% and syncope in about 0.5% Syncopal episodes did not recur with reduction in the dose of PROCARDIa or concomitant antianginal medication. Additionally, the following have been reported muscle cramps, nervousness dyspineal nasa, and chest congestion diarrhea constipation inframmation joint stiftness, shakness siege disturbances burred vision difficulties in balance dermatitis pruritus urticaria, lever sweating childs and sexual difficulties. Very rarely introduction of PROCARDIA therapy was associated which an increase in anginal pain possibly due to associated hypotension. In addition more serious adverse events were observed not readily distinguishable from the natural history of the disease in these patients. It remains possible however that some or many of these events were drug related. Myocardal intarction occurred in about 4% of patients and congestive heart failure or pulmonary edema in about 2%. Ventricular arrhythmias or conduction disturbances each occurred in tewer than 0.5% of patients.

Laboratory Tests. Rare in it to moderate transient elevations of enzymes such as alkaline phospitalse. CPK. LDH. SGOT and SGPT have been noted and a single incident of significantity elevated transian masses and alkaline phosphatase was seen in a patient with a history of gall bladder disease after about eleven months of intedipine therapy. The relationship to PROCARDIA therapy is uncertain. These laboratory abnormalities h

terature **HDW SUPPLIED** Each orange soft gelatin PROCARDIA CAPSULE contains 10 mg of intediprine

PROCARDIA CAPSULES are supplied in bottles of 100 (NDC 0069-2600-66) 300 (NDC 00692600-72) and unit dose (10x10) (NDC 0069-2600-41). The capsules should be protected from onlying and moisture and stored at controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature 59-16 77 F (15-16-25 C) in the manifesture of the protection controlled room temperature of the protection co utacturers or ginal container

More detailed professional information available on request

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Motrin[®] ibuprofen, Upjohn 600 mg Tablets



More convenient for your patients.

Upjohn

"I can do things that I couldn't do for 3 yrs. including joining the human race again."



"My daily routine consisted of sitting in my chair trying to stay alive."

"My doctor switched me to PROCARDIA^[*] as soon as it became available. The change in my condition is remarkable."

"I shop, cook and can plant flowers again."

"I have been able to do volunteer work...and feel needed and useful once again."

PROCARDIA can mean the return to a more normal life for your patients—having fewer anginal attacks, taking fewer nitroglycerin tablets, doing more, and being more productive once again.

Side effects are usually mild (most frequently reported are dizziness or lightheadedness, peripheral edema, nausea, weakness, headache and flushing, each occurring in about 10% of patients, transient hypotension in about 5%, palpitation in about 2% and syncope in about 0.5%).



for the varied faces of angina

- *Procardia is indicated for the management of
- 1) Confirmed vasospastic angina.
- 2) Angina where the clinical presentation suggests a possible vasospastic component.
- 3) Chronic stable angina without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or nitrates or who cannot tolerate these agents. In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks' duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.



A Message from the President



GEORGE T. LUKEMEYER, M.D.
President
Indiana State Medical Association

AM HONORED AND PRIVILEGED TO serve as president of the Indiana State Medical Association.

As president-elect, I had the opportunity to observe the dedicated work of the officers and the staff of our Association. It is a pleasure to acknowledge the many contributions which Dr. John A. Knote made to the Association, the profession and to the citizens of Indiana during his tenure as president. Unanticipated crises and problems are the expected lot of a large and complicated organization like the Indiana State Medical Association. Last year the society was confronted with the VIP program, TEFRA, DRGs, proposals for JCAH medical staff standards, Medical Licensing Board regulations, Baby Doe legislation and numerous other matters of varying importance. ISMA can be proud of John A. Knote's informed, prompt and evenhanded responses to these problems. I thank John, on behalf of the membership, for a job well done!

Lawrence E. Allen, M.D., is presidentelect. Paul Siebenmorgen, M.D., will again chair the Board of Trustees and Herbert C. Khalouf, M.D., was reelected to the chairmanship of the Executive Committee. I look forward to working with all of the officers and staff of the Indiana State Medical Association.

This year will undoubtedly see a resurgence of many of the same challenges of prior years plus some new ones. From time to time, I will discuss some of these major issues on these pages. **DRGs**

On Saturday, Oct. 1, 1983, the future arrived. This marked the beginning of a revolutionary new way of paying hospitals for inpatient medical care services provided Medicare recipients. This, undoubtedly, is the most significant change in medical care financing since 1965 when Medicare was enacted. Prospective payment to acute care hospitals for Medicare patients will be based on diagnostic related groups. Over the next

three years approximately 5,000 acute care general hospitals must accept the DRG prospective payment system for Part A services. There are approximately 470 DRGs which serve as the basis on which patients are classified and hospitals paid.

Hospitals under this system will strive to limit the cost per patient admission to assure economic viability. Physicians will be monitored, and if deemed inefficient or too expensive, will be required to become more cost effective or be faced with a loss of hospital privileges. The primary purpose of the DRG prospective pay system is to contain the cost of inpatient hospital care.

Quality medical care and the physician's obligation to patients have never been of greater concern or importance than at the present time. The challenge is clear. The Indiana State Medical Association seeks superb medical care for all Hoosiers. As physicians, we must make certain that we are also informed and good citizens.

This is an unparalleled opportunity, in these trying times, to earn the respect of patients as their advocate to ensure quality and accessible medical care. Cost containment pressures will be tremendous and, if ruthlessly applied, will most certainly result in either an erosion in the quality of care or, if extreme, in the denial of prompt and needed medical services and the resultant tragic outcome.

Doctors must be active in their communities and in the formulation of national public policies which affect the health and welfare of all citizens. Physicians can earn the public's respect by being knowledgeable and non-self-serving activists. Now is the time to firmly establish the medical profession as the patient's advocate whose main interest is the public's health and welfare.

I hope you all had a joyous Christmas holiday and wish you and all your loved ones a Happy New Year.

Claims-Made Versus Occurrence

Choosing the Best Form of Malpractice Protection



DONALD F FOY
Executive Director
Indiana State Medical Association

"Claims-made" coverage in medical professional liability is a relatively recent development. Because of the dramatic differences in occurence coverage (the traditional form of protection) related to pricing and the protection provided, physicians should be fully aware of the features and philosophies of both types of protection before selecting one over the other. The following article attempts to explain the major differences.

The medical professional liability crisis of the mid-1970s is past history, but two dramatic outgrowths of that situation continue to influence the marketplace for this essential form of insurance protection for physicians.

The most notable result of the crisis has

A Message from the Executive Director

been the advent of physician-owned insurance companies. Through the auspices of state medical associations, more than 35 physician-owned reciprocals, mutuals or stock insurance organizations now write about 60% of medical professional liability premiums. They have effectively replaced large national property and casualty companies as the dominant force in malpractice insurance, although several large companies have re-entered the market they abandoned back in the mid-1970s.

Second in importance to the physicianowned company movement has been the development of the "claims-made" policy contract for medical professional liability. Prior to the mid-1970s, medical professional liability coverage always had been written on an occurrence basis.

The difference between claims-made and occurrence coverage are quite basic: The occurrence form applies to claims covered by the policy contract, whenever they are reported. The claims-made form applies to claims covered by the policy contract only if they are reported while the policy is in effect.

Stated another way, the physician with the occurrence policy is assured that coverage applies to medical acts performed while the policy is in effect regardless of when claims are reported. The physician with claims-made coverage who desires coverage for claims reported after his policy has been terminated, resulting from medical acts performed while his policy was in effect, must purchase a reporting endorsement, which requires a separate premium charge.

This difference is critical because of the unique "long tail" nature of medical professional liability claims.

Most insurance experts agree that the claims-made policy has certain advantages for the insurer, while the occurrence policy is the most effective form of coverage for the policyholder. They also agree that the strategic advantages for insurers that led to the introduction of the claims-made medical professional liability policy in the mid-1970s continue to exist, at least to some degree.

Commercial insurers in the mid-1970s faced the severe problem of rapidly escalating losses, inadequate pricing structures, and strong resistance from policyholders to the large rate increases required to reach pricing levels indicated by the underlying pure premium structure.

The premium charged for the first year of a claims-made contract replacing an occurrence contract, in most instances, was less than the old occurrence rate, masking what in effect were two or threefold increases in premium levels that the insurers would have had to achieve on an occurrence basis. The fact that under the claims-made concept insurers were not required to maintain loss reserves for incurred but not reported losses (the long tail) also made those rates less subject to criticism by insurance regulatory authorities.

Yet another advantage to insurers

switching from an occurrence to a claimsmade contract related to the ratio of premiums to surplus. By converting to claims-made from occurrence, insurers hit by declines in investment portfolios and large underwriting losses were able to substantially retain their book of business without having an unhealthy premiumsto-surplus ratio.

While physician policyholders and prospective policyholders obviously need to be concerned with the financial strengths and actions of their insuring organization, they are most concerned with appropriate pricing and the coverage they receive for their potential loss exposure.

From a pricing standpoint, the claimsmade concept is initially attractive because of the much lower rate levels during the first several years of the policy. Not until the fifth year does the typical claims-made contract reach "mature" rate levels. A closer look shows this apparent attractiveness may be misleading.

A first year claims-made quote for the coming year clearly will be substantially lower than an occurrence quote, assuming identical limits of protection. The occurrence policy must cover all losses that occur during that accident year, regardless of when they are reported. The claims-made policy covers only those losses which occur and are reported during that accident year. A national study of claims during 1975-78 showed that only 26% of dollar value of all claims will be reported during the first policy year.

It would seem that the longer a physician is insured through a claims-made policy, the closer the claims-made premium should be to occurrence costs.

Let's assume, however, that all claims are reported within four years of the close of the accident year. (National studies show that approximately 95% of all malpractice claims are reported within 48 months of the time of the incident.) An occurrence policy written to cover the year 1982 must cover 1982 injuries reported during the first year of the policy (1982), and 1982 injuries reported during the second to fifth years (1983-86).

However, a fifth year claims-made policy written in 1982 must cover 1982

injuries reported during that year, and then goes backward, not forward: It also must cover 1981 injuries reported during the second year of the 1981 accident year, 1980 injuries reported during the third accident year of the 1980 accident year, etc.

This means the occurrence premium should be more, not less, than the mature claims-made level. The only exposure common to both policies is the first year. Assuming stable claims reporting patterns, and also assuming rising claims frequency, an occurrence policy written in 1982 will encounter more claims than will the fifth year claims-made policy written in 1982.

It also is reasonable to assume that claims severity will be higher. If a particular injury is worth \$100,000 if reported in 1982, inflationary economy will increase the value of that injury over a period in time so that it may be worth \$150,000 in 1986.

Herein lies the extremely important matter of extent and cost of coverage, for the physician leaving the claims-made concept upon retirement, ill health, or other reason, for claims that will be reported in future years. Obviously, whatever insurer provides coverage for that exposure will be required to make an appropriate premium charge. The exact nature of that charge will be unknown to the physician policyholder until such coverage actually is provided.

There is another major concern with the claims-made approach: conflicting incentives to report medical injuries that might give rise to claims in future periods.

The claims-made insurer has no financial incentive to encourage the reporting of potential liability by policyholders, unless the policyholder is planning to discontinue claims-made coverage or to transfer from one claims-made insurer to another. In fact, an improvement in reporting might leave the claims-made insurer with an inadequate rate level and substantial underwriting losses.

Of course, what is needed in medical professional liability is strong encouragement of prompt reporting of injuries that might give rise to liabilities.

The advent of claims-made coverage in

medical professional liability, still a very recent development, already has resulted in several specific conclusions that are extremely significant to all physicians.

First, it is universally agreed that appropriate pricing of occurrence-based medical professional liability coverage creates serious challenges for an insurance organization. However, the claims-made concept creates similar, if not greater challenges, for the insured physicians, who must evaluate the fairness of a premium quotation for claims-made coverage. By offering claims-made rather than occurrence, the company effectively transfers the risk of uncertainty concerning future price increases back to the insured physician, who is in a much less advantageous position to evaluate this uncertainty.

Second, claims-made coverage is technically more complex than occurrence. The policyholder seeking (or forced) to change insurers is faced with potential coverage problems, unless the extended reporting endorsement is purchased from the expiring insurer. Additionally, the policyholder faces the extremely dangerous prospect of an unfunded liability.

Third, public policy considerations, however desirable or appropriate, arise from the potential that physicians will not purchase reporting endorsements at the time claims-made coverage is terminated and that future claimants will not have appropriate redress.

Fourth, the marketing strategies of claims-made insurers give them little financial incentive to encourage the prompt reporting of medical injuries likely to give rise to claims or suits in future periods.

Claims-made coverage almost certainly will continue to be offered by insurers seeking a more facile means of dealing with the serious financial challenges caused by the volatility of the medical professional liability market. Physicians, whose greatest concern is appropriate coverage when claims arise, must very carefully weigh that absolute need against the apparent attraction of initially lower costs of the claims-made concept.



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Now he knows that alcohol and some medicines don't mix. In fact, more than half the 100 most prescribed drugs have at least one ingredient that can cause trouble if taken while drinking alcohol. The result of mixing these drugs (alcohol is a drug) may be no more than simple temporary illness, but some combinations can be dangerous, even deadly.

So, don't make a test tube out of your body. Be sure to tell your doctor or druggist about any medications you are taking and be sure to ask about the consequences of mixing a newly prescribed drug with alcohol.

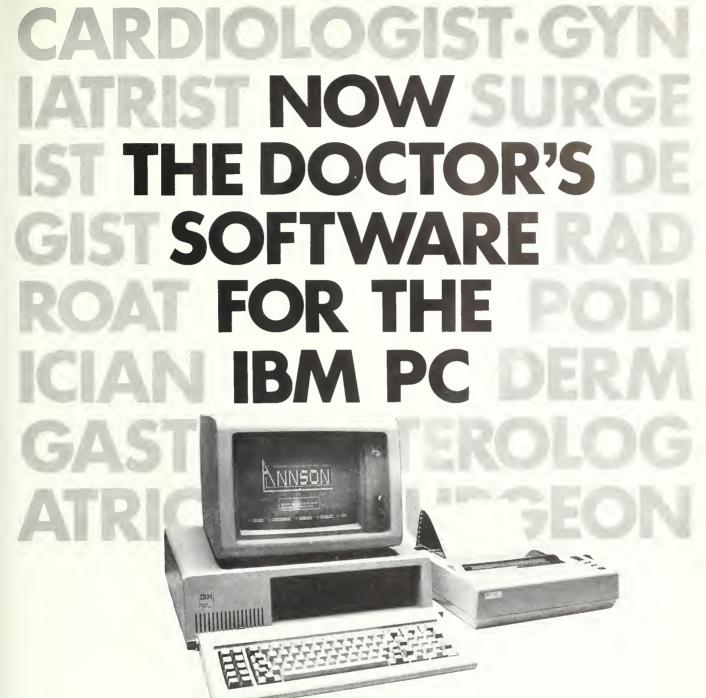
Also, make it a habit to check the label carefully when you get a drug, whether it's a prescription or over-the-counter medication.

And when you get any prescription, be sure you know—

- The name of the drug
- Its purpose what conditions does it treat?
- How and when to take the drug—and when to stop taking it
- What food, drinks and other drugs to avoid while taking it
- What **side effects** may result—are they serious, short-term, long-term, etc.?

If you have any questions about your prescription, ask your doctor or pharmacist.

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Principles of Medical Ethics

A United Nations Resolution

"The 37th session of the United Nations General Assembly adopted a resolution on Principles of Medical Ethics in the protection of prisoners and detainees against torture and other cruel, inhuman, or degrading treatment or punishment,

"Many health groups have endorsed these principles, including the Executive Board of the World Health Organization which, at its 63rd session in January 1979, endorsed a draft body of principles prepared by the Council for International Organizations of Medical Sciences (ClOMS), upon which the adopted principles are based.

"As written, the principles do not preclude the conduct of biomedical and behavioral research with prisoners as volunteer subjects, as provided in the Regulations for the Protection of Human Subjects of the Department of Health and Human Services. These regulations permit such research, if certain elaborate safeguards are used.

"The Director-General called the resolution to our attention, noting operative paragraph 2, which calls upon all governments to give the principles together with the resolution the widest circulation, particularly among medical and paramedical associations. . . ."—Samuel Lin, M.D., Assistant Surgeon General, Deputy Assistant Secretary for Health (Intergovernmental Affairs), Department of Health & Human Services, Rockville, Md.

Resolution Adopted by the General Assembly

The General Assembly,

Recalling its resolution 31/85 of 13 December 1976, in which it invited the World Health Organization to prepare a draft code of medical ethics relevant to the protection of persons subjected to any form of detention or imprisonment against torture and other cruel, inhuman or degrading treatment or punishment,

Expressing once again its appreciation to the Executive Board of the World Health Organization which, at its sixtythird session, in January 1979, decided to endorse the principles set forth in a report entitled "Development of codes of medical ethics" containing, in an annex, a draft body of principles prepared by the Council for International Organizations of Medical Sciences and entitled "Principles of medical ethics relevant to the role of health personnel in the protection of persons against torture and other cruel, inhuman or degrading treatment or punishment",

Bearing in mind Economic and Social Council resolution 1981/27 of 6 May 1981, in which the Council recommended that the General Assembly should take measures to finalize the draft Principles of Medical Ethics at its thirty-sixth session,

Recalling its resolution 36/61 of 25 November 1981, in which it decided to consider the draft Principles of Medical Ethics at its thirty-seventh session with a view to adopting them,

Alarmed that not infrequently members of the medical profession or other health personnel are engaged in activities which are difficult to reconcile with medical ethics,

Recognizing that throughout the world significant medical activities are being performed increasingly by health personnel not licensed or trained as physicians, such as physician-assistants, paramedics, physical therapists and nurse practitioners,

Recalling with appreciation the Declaration of Tokyo of the World Medical Association, containing the Guidelines for Medical Doctors concerning Torture and other Cruel, Inhuman or Degrading Treatment or Punishment in relation to Detention and Imprisonment, adopted by the twenty-ninth World Medical Assembly, held at Tokyo in October 1975,

Noting that in accordance with the Declaration of Tokyo measures should be taken by States and by professional associations and other bodies, as appropriate, against any attempt to subject health personnel or members of their families to threats or reprisals resulting from a refusal by such personnel to condone the use of torture or other forms of cruel, inhuman or degrading treatment,

Reaffirming the Declaration on the Protection of All Persons from Being Subjected to Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, unanimously adopted by the General Assembly in its resolution 3452 (XXX) of 9 December 1975, in which it declared any act of torture or other cruel, inhuman or degrading treatment or punishment an offense to human dignity, a denial of the purposes of the Charter of the United Nations and a violation of the Universal Declaration of Human Rights,*

^{*}Resolution 217 A (III).

Recalling that, in accordance with article 7 of the Declaration in resolution 3452 (XXX), each State shall ensure that the commission of all acts of torture, as defined in article 1 of that Declaration, or participation in, complicity in, incitement to or attempt to commit torture are offenses under its criminal law,

Convinced that under no circumstances should a person be punished for carrying out medical activities compatible with medical ethics regardless of the person benefiting therefrom, or be compelled to perform acts or to carry out work in contravention of medical ethics, but that, at the same time, contravention of medical ethics for which health personnel, particularly physicians, can be held responsible should entail accountability,

Desirous of setting further standards in this field which ought to be implemented by health personnel, particularly physicians, and by Government officials.

- 1. Adopts the Principles of Medical Ethics relevant to the role of health personnel, particularly physicians, in the protection of prisoners and detainees against torture and other cruel, inhuman or degrading treatment or punishment set forth in the annex to the present resolution,
- 2. Calls upon all Governments to give the Principles of Medical Ethics, together with the present resolution, the widest possible distribution, in particular among medical and paramedical associations and institutions of detention or imprisonment in an official language of the State,
- 3. Invites all relevant intergovernmental organizations, in particular the World Health Organization, and nongovernmental organizations concerned to bring the Principles of Medical Ethics to the attention of the widest possible group of individuals, especially those active in the medical and paramedical field.

ANNEX

Principles of Medical Ethics relevant to the role of health personnel, particularly physicians, in the protection of prisoners and detainees against torture and other cruel, inhuman or degrading treatment or punishment

Principle 1

Health personnel, particularly physicians, charged with the medical care of prisoners and detainees have a duty to provide them with protection of their physical and mental health and treatment of disease of the same quality and standard as is afforded to those who are not imprisoned or detained.

Principle 2

It is a gross contravention of medical ethics, as well as an offense under applicable international instruments, for health personnel, particularly physicians, to engage, actively or passively, in acts which constitute participation in, complicity in, incitement to or attempts to commit torture or other cruel, inhuman or degrading treatment or punishment.**

Principle 3

It is a contravention of medical ethics for health personnel, particularly physicians, to be involved in any professional relationship with prisoners or detainees the purpose of which is not solely to evaluate, protect or improve their physical and mental health.

- **See the Declaration on the Protection of All Persons from Being Subjected to Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (General Assembly resolution 3452 (XXX), annex), article I of which states:
- "1. For the purpose of this Declaration, torture means any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted by or at the instigation of a public official on a person for such purposes as obtaining from him or a third person information or confession, punishing him for an act he has committed or is suspected of having committed, or intimidating him or other persons. It does not include pain or suffering arising only from, inherent in or incidental to, lawful sanctions to the extent consistent with the Standard Minimum Rules for the Treatment of Prisoners.
- "2. Torture constitutes an aggravated and deliberate form of cruel, inhuman or degrading treatment or punishment."

Article 7 of the Declaration states:

"Each State shall ensure that all acts of torture as defined in article 1 are offenses under its criminal law. The same shall apply in regard to acts which constitute participation in, complicity in, incitement to or an attempt to commit torture."

Principle 4

It is a contravention of medical ethics for health personnel, particularly physicians:

- (a) To apply their knowledge and skills in order to assist in the interrogation of prisoners and detainees in a manner that may adversely affect the physical or mental health condition of such prisoners or detainees and which is not in accordance with the relevant international instruments;***
- (b) To certify, or to participate in the certification of, the fitness of prisoners or detainees for any form of treatment or punishment that may adversely affect their physical or mental health and which is not in accordance with the relevant international instruments, or to participate in any way in the infliction of any such treatment or punishment which is not in accordance with the relevant international instruments.

Principle 5

It is a contravention of medical ethics for health personnel, particularly physicians, to participate in any procedure for restraining a prisoner or detainee unless such a procedure is determined in accordance with purely medical criteria as being necessary for the protection of the physical or mental health or the safety of the prisoner or detainee himself, of his fellow prisoners or detainees, or of his guardians, and presents no hazard to his physical or mental health.

Principle 6

There may be no derogation from the foregoing principles on any ground whatsoever, including public emergency.

^{***}Particularly the Universal Declaration of Human Rights (General Assembly resolution 217 A (III), the International Covenants on Human Rights (General Assembly resolution 2200 A (XXI), annex), the Declaration on the Protection of All Persons from Being Subjected to Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (General Assembly resolution 3452 (XXX), annex) and the Standard Minimum Rules for the Treatment of Prisoners (First United Nations Congress on the Prevention of Crime and the Treatment of Offenders: report by the Secretariat (United Nations publication, Sales No. 1956.IV.4), annex I.A.).



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Union Leaders Don't Lead

Commentary

cal leadership.

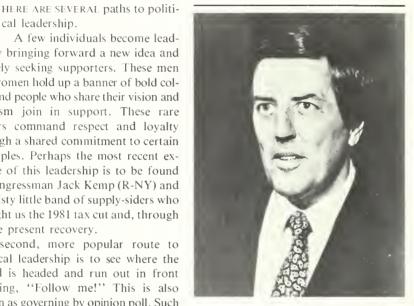
A few individuals become leaders by bringing forward a new idea and actively seeking supporters. These men and women hold up a banner of bold colors, and people who share their vision and idealism join in support. These rare leaders command respect and loyalty

through a shared commitment to certain principles. Perhaps the most recent example of this leadership is to be found in Congressman Jack Kemp (R-NY) and his feisty little band of supply-siders who brought us the 1981 tax cut and, through it, the present recovery.

A second, more popular route to political leadership is to see where the crowd is headed and run out in front shouting, "Follow me!" This is also known as governing by opinion poll. Such "leaders" are, in fact, followers, but that doesn't stop them from being elected to public office.

A third group consists of the "do-ityourself" school of political leadership. One simply stands in front of the television cameras and announces that he or she is representing or speaking for some group. This is how Ralph Nader became a consumer advocate—consumers didn't elect him. If you insist that you speak for the people, or consumers, or the average American, and you repeat this claim loud enough and long enough, eventually the evening news will begin to believe it. (And once it is on television or in the newspapers it becomes true, of course.)

Unfortunately, when speaking on political issues, too many labor union leaders have chosen the path of leadership through self-appointment. These



RICHARD L. LESHER President U.S. Chamber of Commerce

union officials do not poll their members before speaking out on issues such as federal spending, taxes or the deficit. They simply presume to speak for their members, and then spend compulsory union dues to promote political ends their members may or may not support.

A recent Gallup Poll commissioned by the U.S. Chamber of Commerce shows that in doing so these union officials presume too much.

The AFL-CIO, America's largest union federation, has endorsed a proposal to increase federal taxes by \$120 billion over the next three years. Funny, why would

union members want to pay higher taxes? They don't. While 67% of all Americans understand that an increase in income taxes would pose a great threat to economic recovery, union members were even stronger in opposing new taxes. Seventy-two percent of union members agreed that higher taxes would damage the recovery.

When asked whether the deficit should be reduced through increasing taxes or reducing federal spending, 54% of union members opted for reducing spending. Only 3% wanted to see higher taxes. Now, does the AFL-CIO represent the views of its members? Well, yes, sort of. Here they represent 3% of their members. (And collect dues from 100% of their members.)

Should tax brackets be indexed to prevent inflation from pushing working Americans into paying higher and higher marginal rates? The AFL-CIO says yes, our taxes should increase with inflation. Union members disagree by more than a two-to-one margin.

Should President Reagan veto some of the spending bills that exceed his budget request? The AFL-CIO wishes to protect its own special interest spending programs. Almost three-quarters of union members want to see that veto pen unsheathed.

When Lane Kirkland, president of the AFL-CIO, appears on television demanding higher taxes and more government give-away programs, the administration and Congress should remember that the vast majority of the roughly 20 million union members in America disagree.

They should also remember that Lane Kirkland has only one vote.

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The Ever Normal Mammary

Commentary

HOSE OF US physicians who are dry behind the ears can clearly remember a federal project of some years back termed the "Ever Normal Granary." This was, of course, an effort by the federal government to store grains in times of surplus, and then market grains during years of crop failures, famine or shortage.

Observant physician that I am, it has occurred to me that similar surplus and deficiency states exist in the case of the female mammary gland. We physicians know that there are women loose in the land who are afflicted with modest, moderate, or even heroic over endowments. And on the minus side, there are those who have slight deficiency, substandard endowment, shortage, hypoplasia, famine or aplasia. This is really a problem of enormous (and on the other hand, sometimes miniscule) proportions. I am proposing a new project to be called "The Ever Normal Mammary."

According to this "Ever Normal Mammary" concept there would be shifting of natural surplus tissue from those over supplied to those under supplied. This would be a much better solution than the present system of wastage by diminution-and-discard surgery, or augmentation by plastic prosthesis. Certainly the problem of tissue rejection would have to be solved, but (optimist that I am) I have little doubt that a crash program under forced draft with liberal government funding would be successful in this regard.

Correspondence: 2600 W. Jackson St., Muncie, Ind. 47303.



PHILIP BALL, M.D. Muncie

This concept of the "Ever Normal Mammary" would require that a neutral, unbiased, non-profit Council of Mammary Mensuration would have to be formed, composed of persons having no conflict of interest, and therefore chaired by no surgeons, but composed of good and learned physicians, representatives of the women's undergarment industry, the women's clothing industry, artists, connoisseurs, representatives of women's groups, structural engineers, and interested consumers. These people would indeed be under great persuasive pressures from all sides. Many women would de-

mand augmentation or diminution that did not warrant such. Strict criteria for measuring women's mammary glands would have to be made. It would certainly be a thankless job in some borderline cases, although the extreme cases would be easy.

If there be some refined and gentle readers who doubt the necessity and propriety of such mammary considerations, let me refer them to the Old Testament of the Holy Bible in the Song of Solomon. Chapter 8, Verses 8 through 10. In these verses it states as follows: "We have a little sister and she hath no breasts; what shall we do for our sister in the day when she shall be spoken for?" Obviously this referred to a flat chested woman and the question of what to do for her when she should be married. The next verse states: "If she be a wall, we will build upon her a palace of silver." Obviously, this implies that the girl was going to be provided with silver falsies. In Verse 10 the woman says, "My breasts are like towers. Then was I in his eyes as one that found favor." This obviously was a woman that was satisfied with the size of her breasts and had no complaints in either direction.

I hasten to add that I would be willing to selflessly sacrifice some of my limited free time to serve on this Council of Mammary Mensuration to help bring the "Ever Normal Mammary" to the American woman.

P.S. Women's groups may claim the "Ever Normal Mammary" is an example of male chauvinism, and they may be right. If so, let them come up with an equivalent program for men!

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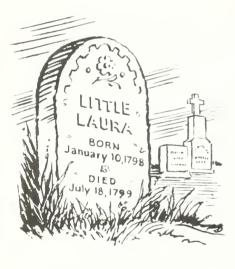
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Little Laura and Others Like Her

Health Care of American Colonial Children

MRS. ELEANOR A. HANNEMANN W. Lafayette



HILF VACATIONING in North Carolina, our family visited Beaufort, the state's third oldest town. This small, historic place has a church and a cemetery there with interesting tombstones. It's a moment of triumph to find the oldest or the youngest interred; or to find an unusual name. My children also find it fun to practice their math and their reading by subtracting the dates and deciphering the names on the tombstones. I also encourage them to try to think of their forebearers and recall times in American history.

It was in Beaufort one summer that we came upon the grave of "Little Laura." When Little Laura's grave was discovered, we all clustered around it. Our daughter Laura intoned: "Little Laura. Born January 10, 1798. Died July 18, 1799." She wailed, "Mother! She was only 18 months old!" It was an echo that might have occurred those long years before. "How did she die?" the 20th century Laura asked wistfully. It was a teachable moment. We talked of early American children. What were they like? What did they encounter? How did they live and die?

I have often thought of that Little Laura and others like her—their health and illnesses, their medical care. What was it like? Studying and researching this topic, I thought, would add another dimension to American family history.

'God's Will'

Most children in Colonial America were expected to be like adults. They were dosed, diagnosed and directed as if they were grown up. Their illness and wellness were thought to be the result of either a life of goodness or evil. Often their world was pictured as fraught on all sides by a satanic figure ready to harm or decimate them. Richard Shyrock says, "Those who were ill in Colonial days underwent stern experiences." Some of those "stern experiences" included a child's medical care, which was based on a very small amount of scientific information. To many of the Colonists, adversity was deemed "God's will" and there was little in the way of human endeavor that alleviated or prevented suffering.

Most of a Colonial child's life was perilous. The child's first few days and weeks immediately following birth were filled with not only illness and infection, but with nutrition problems as well. The way becomes only a little less hazardous as the child grew, plagued as it was by more illness, accident, and injury.

Children during Colonial times survived and were sustained "by guess and by gosh," it seems. Their corporate will to live a little longer with each generation, appears to me to be a tribute to the little fighters. Though for most children life was grim in Colonial America, there was a pervading glimmer of hope. New ideas were springing up, and though many of the old ideas persisted, many were discarded. For Colonial children, each generation had to have been perceived a little better than the last.

Medical ideas and information for all who traveled to the New World was as vague as the ocean they crossed. Colonial children had to be tough to survive that first hurdle.

Medical Pioneers

Most of the medical care information that was available in America was brought from Europe. Some Renaissance men like Paracelsus, Harvey, Malphighi, Vesalius, Fallopius, and Fabricius had

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made significant contributions to the world of science and medicine. However, it was Galen, another of the great contributors, who was the authority for many of the men of science who traveled to the New World. Galen's theory was that disease was merely a derangement of body function which could be returned to normalcy by employing medicine. Reverend John Saffrin of Rhode Island, for example, favored Galen's theory. He noted that timing was an important factor. "Mark well the hour" (of the onset of sickness), "and the humour then



reighning, the better to find the remedy." The humours were blood, dominant from 9 p.m. to 3 p.m.; bile, from 3 a.m. to 9 a.m.; black bile, from 9 a.m. to 3 p.m.; and phlegm, from 3 p.m. to 9 p.m. The Galenic system was widely followed by many Colonials until about 1800.

The Doctrine of Signatures was another popular theory. It postulated that each illness had a corresponding cure in nature. Walnut meat, for example, resembled the

convolutions of the brain. According to this doctrine, walnuts should be employed for treating neurological illness. Reverend Nicholas Collin, rector in Pennsylvania, exclaimed, "The bountiful Creator discovers his marvels in proportion to our wants . . . every country has native remedies against its natural defects." Similia Similibus (like by like), another name for the Doctrine of Signatures, was confirmed later by the use of inoculation.

Indian Influence

Indians on the North American continent were another resource for medical advice for the Colonists. Snake venom was used to prevent death from snake bite, for example. Too, Indians were exposed to many wounds, fractures and diseases. They knew much more about anatomy, for example, than did their Colonial counterparts. "American Indians handled their wounds, empyemas, fractures, and dislocations as well if not better than 18th century physicians," writes Dr. Maurice Gordon. Local herbs, roots and bark were the Indian's "materia medica," writes Glenn Sonnedecker.

When natural means did not work, the Indians, like the Colonists, turned to the supernatural. Apache Indians hung a cactus stick on the neck of children to protect them from illness. This was similar to the preferred treatment for Colonial children who wore a bag of asafaetida around their necks for the same reason. Red and white man alike needed the supports of faith and the unknown to make them well and keep them healthy.

Sin and Sickness

Faith and unfaltering reliance on God's will was the opiate of most Colonial parents. Illness and death were so much a part of the Colonial's life that most often it could be explained in no other way, except that it was "God's will." Misfortune was blamed on sinful practices, cholera, for example, was to many households, a consequence of sin: Colonials reasoned that man had infringed upon the laws of God, and cholera was an inevitable and inescapable judgment. When someone died it could

be cited by the clergy as a "rod in the hand of God." Richard Shyrock' sneers, "They (the Colonists) turned to prayer; a practice which, in one's cynical moments, might be termed theological prophylaxis and therapy." Children were expected to either die or fight it out with the devil. The little fighters lost often enough, but about 50% survived.

A few physicians in the Colonies ministered to children but most ignored infants and children. Because the mortality rate was so high, many physicians probably were reluctant to diagnose, much less treat, the little people. The few physicians who did minister to children were mentioned, not in scientific literature, but in diaries and letters. One physician, Dr. Edward Stafford, in the Massachusetts Bay Colony, probably wrote the first prescription for children.



In 1643, the prescription was for yellow "jaundise" or "Jaunders." It read, "Boyle a quart of sweet milke, dissolve therein as much by-salt, or fine saltpeter as shall make it brackish in tast and putting saffron in a fine linen claut, rubb it into the milke, until the milke be very yellow; and give it to the patient to drink." That the patients had the fortitude to withstand this prescription speaks well for the hardihood of the Colonists.

Midwives

The Colonial child received much medical care at the hands of midwives.

Probably this was the largest group of those concerned for children's health care. Skillful midwives had "hands on" training and a good deal of common sense. With the large number of children in each family, there were ample patients and plenty of experience.

There were a few prominent midwives in the Colonies. Bridget Fuller, a wellknown midwife of Plymouth, was actually recruited to practice in the town of Rehoboth, Massachusetts. Another famous midwife was Anne Hutchinson. Though she was highly skilled and revered, Anne was maligned and banished from the Massachusetts Bay Colony after only four years because of her religious preference. Furthermore, Midwife Hutchinson had the misfortune of being present at the birth of an anencephalic infant. The mother of the infant and Anne were regarded as a sign of God's displeasure. The deformed child was vividly described by John Winthrop. That the description resembled the satanic image known to the erstwhile medieval mind, was no accident. Anne later gave birth to a hydatidaform mole and some months after that she was killed by Indians. Massachusetts authorities later confirmed that the punishment, no doubt "from the hands of God," was only what she deserved.

Common Illnesses

The hands of God, it seems, came down hard on American Colonial children in the form of illness. The newly arrived Colonists brought disease with them and were loathe to find even more disease that was indigenous to America. The common illnesses among children were smallpox, measles, scarlet fever, diptheria, influenza, malaria, yellow fever, dysentery, and tuberculosis, but many of the illnesses were simply called "the fever." Throat distemper, diphtheria and scarlet fever were often confused with each other. Whooping cough and dysentery or "the bloody flux," were often diagnostic problems. Though the illnesses were separate, they must have run one into another considering the ill child's weakened condition. With the high mortality among children, and the terrible illness, those children that lived past 5 had to be sturdy: They beat the odds.

Smallpox epidemics were prevalent and half to two-thirds of children died of this horribly painful and disfiguring illness. Before inoculation reduced the incidence of the disease, smallpox was accepted as just another of life's hazards. Reverend Francis Higginson wrote, almost matterof-factly, "My children began to be sick of the smallpox which was brought by one Mister Brown whom it pleased God to make the first occasion of bringing that contagious disease among us. And so it was God's will that the children died. It pleased God to remember mercy in freeing it from a world of misery." Those Colonial children could not will themselves to live, but others did. And, it would not be too long before a preventative, the smallpox inoculation, was introduced. It succeeded in giving the American Colonial child a little firmer and longer grasp on life.

Measles was not life-threatening, but the illness was viewed as evidence of God's providence. John Hull wrote in 1657 that "scarce any house escaped measles, only through the goodness of God, scarce any died of it."

Odds of contracting other maladies were high. Though not fatal, Colonial children also suffered from thrush, worms and skin infections. Children, like animals today, harbored all kinds of worms. Roundworms were passed in the stools singly and in wriggling masses; sometimes a tapeworm would protrude from the rectum in a strip a yard long or more, to the consternation of all who beheld it. Pinworms could be seen crawling about the anus as the child scratched to relieve the itch. When I read of these little tykes suffering from these torments, I wonder all the more at their endurance.

American endurance had to be well evidenced in the light of a newborn's first days and weeks. After having its throat swabbed with a rough rag, a rod was laid against the baby's back and neck and wrapped tight. Shortly thereafter, the newborn child was subjected to baptism. Irrespective of the weather, it's not hard

to imagine perhaps having to break the ice in the baptismal font and sprinkling ice cold water on the new baby's head. Too, the church or meeting house was generally drafty, cold, damp, and often poorly ventilated. That Colonial children didn't die in larger numbers is another testament to their tenacity.

Infant Feeding

The couple with the new baby had to hope for the best to feed their issue.⁴⁻⁸ The best was the breast. In Colonial America, as in England, it was assumed that the baby would nurse. However, there were few guidelines as to how much or how often the babies should be fed.

Even if a new mother wanted to nurse, often she was beset with medical problems, and there was little relief from those. For breast abscess and sore nipples, all a new mother could hope for was a "Receipt for Chapp'd Nipples," which Ebenezer Parkman copied from the London Magazine. Quack apothecary Robert Agnew advertised that he had a salve for "Suckling Women's Nipples." Dr. William Rand, a bombastic surgeon, advertised an extraordinary and secret salve that would hasten the rupture of a breast abscess.

There were other nursing problems, too. Some babies would not nurse and for unknown reasons. Citizens in Waterbury, Connecticut, were told of a baby who would not nurse, and for such a silly reason. It seems that while the mother was pregnant, she had a "violent longing to eat the flesh from her husband's arms, and he indulged her." The longing continued, and when the baby was born, it refused the breast. "But," the account goes, "baby ate heartily when it was given a raw fowl dipped in blood and a little milk mixed with blood."

Escaping illness, the Colonial mother often must have suffered from just plain exhaustion. Tim Edwards, in 1711, probably didn't understand why his wife was so tired and had trouble nursing. She only had a new baby and six other children to care for while he was off on a military expedition. Tim might have had to look for a wet nurse when he returned if his

wife couldn't handle all the chores and nurse, too.

Though it was common to employ a wet nurse for the first two or three weeks after birth, there were recriminations. Colonials Cotton Mather and William Cadogan intoned, "You will suckle your infant yourself if you can; be not such an ostrich as to decline it, merely because you would be one of the careless women, living at ease. They are dead while they live." It was a stern admonishment. Furthermore, "It is an error in judgment on the part of the mother, who only for the preservation of beauty and fine shape of body, would put out her infant to nurse."

Many women feared not only admonishment, but also punishment. There were numerous cases of a wet nurse accidentally smothering the infant. Reverend William Caspar and Benjamin Dolbeare dourly reported of an infant death, by "overlaying by the wet nurse."

However, in spite of dire warnings, wet nursing increased in popularity. Besides, there was a profit in wet nursing. It wasn't long before there was a thriving business in wet nurse brokers.

The Colonial child, beset with all this feeding clamor, was then the object of an even greater event. Deciding the weaning date was a monumental decision. Death, birth and weaning dates were recorded with equal seriousness. Most Colonial children were weaned at 17 months, usually just in time for the next baby. Usually when the weaning date arrived, the mother left town. Sometimes the baby was sent to "grandmother's chamber," and it's reported that grandfather left grandmother's chamber, too. God's will also was involved in this event. One Hannah Hull was, "through the favor of God, weaned without any trouble."

Some did have trouble weaning their children, however, and put it off until they absolutely had to. Samuel Mason, widower, age 85, was to marry Abigail Farris, widow, age 45, who had a three-year-old un-weaned son. It is reported that Abigail weaned her son for the occasion of her marriage. Then there was Reuben Butterfield who was "broad

shouldered and of great strength. He was the champion athlete of the settlement and could leap 12 feet." Reuben was fond of nursing, apparently, and stayed with it until his ninth year. Reuben's record has never been broken.



Feeding by hand was seen as a last resort by some Colonials. There were some crude instruments, mainly made of metal, that were used to feed by hand. Hugh Smith, an English physician and a contemporary of Alexander Hamilton, invented a "bubby pot." This grey metal can looked like a coffee pot with a spout and bulb on the end. The Pennsylvania Germans used a similar instrument developed in their old country. It was not until after 1800 that feeding by hand methods and utensils improved significantly.

When a feeding instrument was used, there were a variety of concoctions in them. Goat's milk was probably the most popular, and then cooked broths and gruels. A newborn of a "Lady of Quality," for example, received a little oil of sweet almond, a little juice of sea onion, then boiled wheat flour and biscuit water. While this sounds unappetizing, there was the case of little Increase Mather who "sucked a pin out of the nipple of his bottel." Though he didn't die, it probably

confirmed the worse fears of feeding by hand.

Cow's milk was not popular with the Colonists until the mid-1700s and then only if there was a brave soul who probably had tried everything for a finicky child. Most Colonists thought that giving cow's milk to children would cause the children to take on bovine features. In 1799 cow's milk was first scientifically analyzed and a new field of milk chemistry developed. However, it was not until 1890 that "clean" milk was developed by pasteurization and sterilization and came into common use.

When a Colonial child had teeth, its menu varied some. Pap and panada sweetened with sugar was initiated, and then an egg or meat broth was added. Locke's "Thoughts on Education," published in England in 1690, advised milk, water-gruel, flummery, and similar "spoonmeat," or brown bread with cheese; but no melons, peaches, plums or grapes. Sometimes mother and grandmother chewed the food for the children, mouthed it out onto a spoon and put it into the child's mouth. It must have been ghastly!

Alexander Hamilton offered some views on supplemental feeding that was in line with other medical writers. He, too, advised pap or panada with a little water and sugar and weak beef tea. Apparently not fearing bovine features, Hamilton and Doctor Hugh Smith advised cow's milk and dictated some quantities. Lionel Chambers of South Carolina suggested canary or other sweet wine and rum. Hippocrates would have approved of the latter: He wrote that "wine should be given to infants because it does not distend the belly and cause wind. These things are done to make the child grow bigger and stronger."

Early Medical Advice

The care and feeding of children by the mid-1700s was being fomented in some publications. By 1783 there were almost 1,700 almanacs containing medical advice. Parents could look to the almanacs for cures and preventatives of many diseases. *Primitive Physick* was written

to "rescue mankind from the jaws of destruction, and to prevent children from pining away in sickness and pain." Reverend John Wesley wrote this do-it-yourself medical book partly because he didn't like doctors. He told his readers to "consult only with godly doctors—IF they could be found."

When godly doctors were not available, there were newspapers to consult. Children of the times, however, had to be pretty sturdy to withstand the treatment advertised in early newspapers. The Boston News-Leader recommended opium and other patent medicine for children. The Royal American Magazine published in Boston and circulated widely, advised calomel and rhubarb for rickets. Obviously, these treatments were not only ineffective, but very dangerous.

Medical societies and publications increased, albeit in small increments, especially after the Revolution. The College of Physicians of Philadelphia, the New Jersey Medical Society, and the New York Medical Society worked out a branch plan of correspondence with medical societies in London, Edinburgh, Stockholm, Copenhagen, Lyons, St. Petersburg, Vienna, Leipzig, and Leyden, as well as the Royal Academy of Medicine, and the Royal Academy of Surgeons at Paris. As time went on, more and more articles of a medical nature were being issued in the United States.

American children were to reap the benefits of all this knowledge and concern. Life expectancy, for example, was on the rise. It went from about 33 years and 30 years, in 1700 for males and females, respectively, to about 35 to 40 years at the turn of the century. Their English counterparts, though, did not enjoy this luxury. The death rate in England was about one-third higher, at the same period in history.

Survival

American children survived then, because they were sturdier than their English counterparts? Or, because the "air was better," in America as some believed? Or, was medical and health care improving? Or, were American children developing a distinct style for survival? All of these questions, really, are unanswerable, so the reason can only be conjecture.

I am of the feeling that in America, Little Laura and others like her were sturdier and lived in a better environment under improving health care. Also, she and her peers were an example of an American child: a fighter and a survivor. Little Laura and those who preceded her and followed her must have awakened each day with a new and fresh outlook, a hopefulness that would be difficult to document.

When Archibald MacLeish died recently, an editor at the *Indianapolis Star*° remembered him with a few lines from one of MacLeish's poems:

"Children know the Grace of God

Better than most of us. They see the world

The way the morning brings it back to them

New and born and fresh and wonderful."

When we last visited Little Laura's grave, my Laura said, "I wish I could have told Little Laura to hang on a little longer, times were getting better." A child sees the world the way the morning brings it back to them, new and born and fresh and wonderful. The American Colonial child had to have seen each morning just that way.

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AUXILIARY REPORT

Hulda Classen (Mrs. Peter) President, ISMA Auxiliary

Joanne Tharp MAL Liaison ISMA Auxiliary

MAL . . . Member-at-Large.

This is not a new term, but it is one receiving renewed attention at the state level of the ISMA Auxiliary.

A Member-at-Large is the spouse of a physician who is an ISMA member and who lives in a county where there is no organized auxiliary. By paying annual dues of \$19, the Member-at-Large will receive two publications: *Facets* (national) and *The Pulse* (state).

Surprisingly, 44 Indiana counties are without an organized auxiliary. The Auxiliary has only 37 MALs.

Under the leadership of Hulda Classen, the ISMA Auxiliary is working to locate and involve eligible spouses. The new office of MAL Liaison has been created; the Auxiliary Board has appointed Joanne Tharp, a MAL from Randolph County, to that position.

Two informative presentations dealing with the MAL problem were made in September during workshops held in Bloomington and Middlebury. In October, a concentrated effort was made to contact potential MALs at the ISMA convention in Evansville. When the open Board meeting was conducted Sunday morning, six MALs were present—a 500% increase over previous years.

Those spouses who live in counties without organized auxiliaries have the same needs as those from large urban areas and organized auxiliaries: They, too, need information concerning legislative changes that are affecting medicine—information the ISMA Auxiliary can provide; and they need to have an opportunity to serve in their own communities whenever there are health-related opportunities. The ISMA Auxiliary is an excellent source for obtaining

ideas, support and encouragement. Finally, they need the friendship of other medical spouses.

We therefore invite statewide cooperation in obtaining the names and addresses of potential MALs. We want to make contact on a one-to-one basis. We especially need to make contact in the following counties where we have NO MAL membership:

Northern area: Newton, White, Miami, Whitley, Huntington and Adams;

Central area: Hamilton, Hancock, Vermillion and Morgan;

Southern area: Sullivan, Daviess, Martin, Orange, Crawford, Perry, Switzerland, Ohio, Ripley and Pike.

Please send the name of any interested person to Joanne Tharp, 226 E. South St., Winchester, Ind. 47394. Immediate contact will be made.

We believe a new day is dawning for the MAL program in Indiana!

South Bend

INDIANA STATE MEDICAL ASSOCIATION AUXILIARY Executive Committee

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BOOK BEVIEWS

Childhood Comes First

By Ray E. Helfer, M.D., Box 1781, East Lansing, Mich. 286 pages, paperback, \$8.

This book was written as a guide in a "crash course" for young adults. To quote from the foreword—"Any young adult (parent, pre-parent, non-parent or older teenager) who feels that his or her interpersonal skills for getting along with others were not learned well enough during childhood should benefit from this course. Those whose early childhood was violent, emotionally deprived, or just left something to be desired should benefit the most. Those professionals who are already working in, or just entering, this field may also benefit. . ."

The author recommends that those who use it enlist a "coach" to read it with them, the coach's role being to "observe, comment, model and, in general, be helpful." Teachers and others with a special interest in children should be the best coaches. The style of the work is breezy and unconventional. Chapter headings include such topics as "Training your Senses, Learning to Interact with Yourself and Others, I'm OK and How I Feel is OK, Responsible for What, Depression, Relationship with Others, and Pregnancy."

Dr. Helfer is a professor of Pediatrics and Human Development at Michigan State University College of Human Medicine. A young woman attending one of his lectures on "Childhood Comes First" sought him out and offered to share some of her problems as a young adult who had been through many of the negative experiences of childhood which Dr. Helfer was discussing. Many of her "missed childhood" experiences presented under an assumed name are used as "take off" points for the various discussions in the book. Problems con-

Dell Publications has released *The Complete and Easy Guide to Social Security & Medicare, 1984 Edition.* The author is Faustin F. Jehle, an attorney. United Press International says: "Every man and woman nearing the age of retirement will find this large soft-cover book most helpful in gaining those benefits due them." \$7.95.

fronting the author and his wife in their own family of six children and the manner in which they were handled appear throughout the volume.

This is not a case book arranged in the usual cookbook style. Anecdotes are freely used to make the author's points. Some medical editors might find the author's brisk, constantly upbeat style disturbing. However, my guess is that it will have distinct appeal for the young adults for whom it is written.

> Paul S. Rhoads, M.D. Richmond Internal Medicine

Learning to Live with Osteoarthritis

An MIPI patient information booklet. Copyright 1983, Medicine in the Public Interest, Inc.

This is a small book of 62 pages, illustrated with line drawings and is supplied *gratis* to physicians by Pfizer Pharmaceutical Healthcare Series, 235 East 42nd Street, New York, New York 10017, upon request.

A good idea of the book can be obtained from the chapter headings, eight in all which are as follows: Overview: A Brief Look at Osteoarthritis; 1. What is Osteoarthritis; 2. How Osteoarthritis Affects You; 3. Treatment for Osteoarthritis; 4. Medication; 5. Exercise and Rest; 6. Other Kinds of Therapy; 7. Quackery, Myths, and Unproved Drugs; 8. Living with Osteoarthritis; Appendix: Exercises.

The language is simple, straightforward English with a minimum of technical terms, all of which are explained. Emphasis is upon complete rapport and freedom of communication between patient and all others involved: doctor, nurses, therapists, and family. The printing and paper are excellent and the light weight of the book should recommend itself to those with tender, painful hands.

I have noticed but one defect in the illustrations, namely, on page 8 the ligaments are described in the text but are not labeled in the drawing. The other labeling is clear.

To me, this is an excellent piece of work

and should help greatly in making the patient feel comfortable in cooperating with the physician and all others concerned. What can't be cured, must be endured, and this book should help mightily in doing so.

A.W. Cavins, M.D. Terre Haute Gynecology

Basic and Clinical Endocrinology

Edited by F.S. Greenspan, M.D. and P.H. Forsham, M.D. Copyright 1983, Lange Medical Publications, Los Altos, Calif. 646 pages, \$25, softcover.

Basic and Clinical Endrocrinology, Lange's first textbook in the important field of endrocrinology, is edited by a current and a former faculty member of the University of California, San Francisco; the authors of the individual chapters are, for the most part, from the west coast. All appear eminently qualified.

The ambitious goal of the volume is to update medical students, residents, practicing physicians, and endocrinologists on endocrinology and selected metabolic disorders. The text encompasses both basic physiology and clinical management. A second edition two years hence is contemplated, as are various translations. Spot reading from various chapters reveals a lucid style. Careful coordination of the various chapters is shown by helpful illustrations, which include both line drawings and patient photographs. Numerous graphs and charts further clarify the textual material. A noteworthy innovation: at the beginning of each chapter is a boxed definition of "Acronyms used in this chapter." This technique of defining terms saves the reader not familiar with current acronyms from the frustration of trying to determine their meanings.

The chapters are generously supplied with references. The index is satisfactory. The binding is durable, flexible plastic, and the price is reasonable. The text is enthusiastically recommended for its target audience.

W.D. Snively, Jr., M.D. Evansville Internal Medicine

The AMA Family Medical Guide

Edited by J.R.M. Kunz, M.D. Copyright 1982, Random House, N.Y. 831 pages, \$27.50, hardcover.

All practicing physicians would be wise to have some familiarity with this book. Given the present interest of the lay public in modern medicine, the volume is sure to be widely used, especially if a paperback edition at a lower cost comes upon the market.

The arrangement of the material is rather unique. Part I is designated "The Healthy Body." In this section the essentials of keeping physically fit—rational exercise, rest, eating habits, healthy mental outlook, etc.—are discussed briefly. Also, the health hazards of smoking and alcohol, facts about cancer, and warning signs of possible serious illness are presented. This section contains an atlas of the human body with short explanations of the functions of the various parts illustrated.

Part 2 is devoted to "Symptoms and Self-Diagnosis." Presumably it will be the section most frequently consulted and, for that reason, is printed on brown paper for quick reference.

When medical problems arise, the index presented in the pages just before this brown section should be consulted. In this index such headings as "Abdomen swollen," ''abdominal pain," "backache," "bladder control," "chest pain," "hearing loss," "dizziness," "painful knee," "sore throat," etc. are presented. On the pages to which the headings refer, pictures and diagrams with algorithms are presented telling the patient how to proceed and where to find more detailed information on the designated pages which follow.

In Part 3 disorders of the various body systems are divided into 23 chapters. The presentations found there deal with causes, symptoms, physical signs, prognosis and therapy as in any medical text; but always in succinct form and in lay language. These, too, are profusely illustrated. In the discussions of treatment, only general outlines are given, stressing under what circumstances a physician should be called and what the patient or his family can safely do until the doctor is consulted. Drug groups from

which the physician may make selections are sometimes mentioned, but no specific drug recommendations are made.

Part 4 of the book is concerned with "The American health care system," "caring for the sick at home," and "death and dying." The final pages contain a drug index, describing very briefly what each drug is used for, possible reactions and contra-indications, but not dosage. A glossary for explanation of medical terms follows, though the latter are avoided when at all possible.

The final and perhaps most important part of the volume, again designated by brown color borders is on "Accidents and Emergencies." Here the discussions are short but adequate, the very useful illustrations being particularly important.

Every practicing physician, if he or his office help will take a few minutes to become familiar with it, will find this a very practical book and a real bargain at its stated cost. It will be especially useful in conveying information to patients.

Paul S. Rhoads, M.D. Richmond Internal Medicine

AMA Drug Evaluations

5th edition. Copyright 1983, American Medical Association. 1,884 pages, \$61.50, hardcover.

Since 1971 there have been five new editions of this book, each updated to keep in stride with the rapid proliferation of new drugs. The original drafts of the 84 chapters of this edition were made by the AMA Division of Drugs, John C. Ballin, Ph.D., director. They were then submitted for review to more than 500 distinguished consultants and the medical staffs of the appropriate pharmaceutical manufacturers; then had a final screening by designees or members of the American Society for Clinical Pharmacology and Therapeutics. Dr. James Sammons, executive vice president of the AMA, points out in the preface that inclusion of a particular drug in this volume does not imply endorsement. The evaluations may be favorable or unfavorable. The attempt is to present enough essential data about each agent to allow the physician to make his own decision regarding use of the drug by his own patient.

In our library, in common probably with most community hospitals, the PDR and Goodman and Gilman's Textbook are the most frequently consulted books on drug therapy. The AMA Drug Evaluations serves a role for the practicing physician somewhat in between the two. For instance, drugs are listed by trade names in the PDR rather than being included within groups having the same general effects. In the PDR the formula, indications, adverse reactions, dosage information are given for each drug, leading to considerable repetition. In the AMA book the same kinds of information are presented, but much of the general information about each drug group is condensed in a short discussion at the start of each chapter. Thus, what is written about each individual medication concerns chiefly those characteristics which make it either practically identical with other members of the group or having special characteristics which one should take into account.

The opening chapters of the AMA book dealing with such matters as prescription writing, drug interactions, adverse reactions, drug response and dosing information are relatively short, and very informative. Such information in a less condensed and more scholarly way is given with extensive bibliographies in Goodman and Gilman. The tables in the AMA volume portraying drug interactions and adverse reactions, particularly in the pregnant patient, will be extremely valuable for the practicing physician who needs this kind of information in a hurry. The extensive index printed on green paper in the middle of the volume is an interesting innovation. In it drugs are listed by trade as well as generic names along with diseases and symptoms.

The forms and dosages in which each drug may be packaged in pharmacies are adequately described in the AMA book.

Paul S. Rhoads, M.D. Richmond Internal Medicine

Encyclopaedia Britannica has released the 1984 issue of *Medical and Health Annual*. It is written for public consumption and contains a special dissertation on dieting to lose weight. Another article discusses AIDS. 448 pages, \$20.95.

Brain Death Is Legal Death

Court Action

A trial court's determination that legal death occurred when a child sustained total and irreversible cessation of all functions of the entire brain was proper, an Illinois appellate court has ruled.

A seven-month-old infant was attached to a ventilation system that ventilated his lungs, caused his heart to continue pumping, and sustained some of his other bodily functions. On Oct. 28, 1982, the hospital sought a declaratory judgment that the infant was legally dead, thereby allowing it to remove the ventilation system. Both parents and the guardian *ad litem* opposed the removal.

At trial, a pediatric neurosurgeon testified that the child had suffered total,

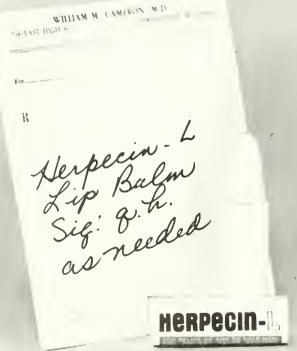
Courtesy of The Citation, Oct. 1, 1983.

complete, and irreversible brain death. The neurosurgeon's diagnosis was confirmed by two other consultants. On Nov. 4, the court found that the infant had been legally dead as of Oct. 23, and authorized removal of the ventilation system. While an appeal was pending, the child's heart stopped functioning and the ventilation system was removed.

On review, the appellate court upheld the trial court's decision. A person is legally dead when he or she sustains either (1) irreversible cessation of total brain function, according to usual and customary standards of medical practice, or (2) irreversible cessation of circulatory and respiratory functions, according to usual and customary standards of medical practice.

The court also recognized and took into account that the Illinois General Assembly has stated for purposes of the Uniform Anatomical Gift Act that death means the irreversible cessation of total brain function, according to usual and customary standards of medical practice. The court said that it found it significant that the legislature's definition of death under the Uniform Anatomical Gift Act conforms to the consensus of the medical community that total brain death is the death of the person, and that adoption of that definition of death in the present case will conform the legal definition of death in Illinois to current medical standards.—In re Haymer, 450 N.E.2d 940 (III. App.Ct., June 8, 1983)

Dx: recurrent herpes labialis



"Herpecin-L Lip Balm is the treatment of choice for peri-oral herpes." GP, New York

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OTC. See *P.D.R.* for information. For trade packages to make your own clinical evaluation, write:

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In Indiana, "HERPECIN-L" Cold Sore Lip Balm is available at all *Hook*, *Osco*, *Revco* and *SupeRx Drug Stores* and other select pharmacies.

CME QUIZ

TO OBTAIN ONE HOUR OF CATEGORY I AMA CME CREDIT, answer the following questions by circling the correct answer on the answer sheet below. Complete and clip the application form and mail it to: Indiana University School of Medicine, CME Division, Fesler Hall 224, 1120 South Dr., Indianapolis 46223.

Acute Respiratory Failure

CONTINUED FROM PAGES 13-17

- A 60-year-old man with chronic airways obstruction has been followed in your office for several years. He works part-time as a watchman in a warehouse. His blood gases in February are pO₂ 48, pCO₂ 55, pH 7.34 on room air. In June he is stable, with significant exertional dyspnea, but still working. His blood gases then are pO_2 51, pCO_2 58, pH 7.35 on room air.
- I. He is in acute respiratory failure based on his abnormal blood gases
 - a. True
 - b. False

In August, his wife brings him in with a sixday history of increasing cough, sputum production, and worsening dyspnea. He has been very anxious, argumentative, and at times seems confused. He appears very agitated and tremulous when you see him. He has a harsh cough. His blood gases are pO2 36, pCO2 74, pH 7.26.

- 2. You should:
 - a. give him 10 mg Valium to calm him
 - b. give him 30 mg of codeine for his cough
 - c. admit him and start 1 liter of oxygen

- d. immediately intubate him and place on a ventilator
- 3. He has significant ankle edema which you had not noted previously. His heart rate is 136. He should be rapidly digitalized.
 - a. True
 - h False
- 4. You have had the patient on an oral theophylline for the past year. His wife has continued to give it to him. His theophylline level now is 17 μ g/cc. He is wheezing. You should:
 - a. give him a loading dose of aminophylline of 5 mg/kg and start 0.9 mg/kg/hr constant infusion
 - b. give him no loading dose but start 0.9 mg/kg/hr
 - c. give him a 5 mg/kg loading dose and start 0.4 mg/kg/hr
 - d. start a 0.4 mg/kg/hr maintenance without a loading dose
- 5. If his pCO₂ begins to rise you should stop his oxygen to prevent a further rise.
 - a. True
 - b. False

- 6. If his blood pressure begins to rise, propanolol would be a poor agent to use to control it
 - a. True
 - b. False
- 7. As he stabilizes and becomes more alert, you decide to give an aerosolized bronchodilator. This is best administered with an IPPB machine.
 - a. True
 - b. False
- 8. You begin to search for precipitating causes. Which factor(s) could play a role in causing the acute respiratory failure?
 - a. gastroesophageal reflux
 - b. respiratory infection
 - c. initiation of a new beta blocker eye drop for his glaucoma
 - d. any of the above
- 9. To ensure adequate nutrition during his acute illness you should give him at least 2,000 calories a day as carbohydrate parenterally.
 - a. True
 - b. False
- 10. Acute respiratory failure can be potentially caused by:
 - a. only a primary respiratory or airway problem
 - b. head trauma
 - c. use of an aminoglycoside antibiotic
 - d. any of the above

DECEMBER CME QUIZ Answers

by nasal cannula

Following are the answers to the CME quiz that appeared in the December 1983 issue: "Ventricular Arrhythmias: Guidelines for Primary Care Management," by James J. Heger, M.D.

1. b 6. 7. d 8. b 2. d 3. b 4. a 9. a 5. b 10. c

Answer sheet for Quiz: (Respiratory Failure . . .)

1. a b 6. a b 2. a b c d 7. a b 3. a b 8. a b c d 4. a b c d 9. a b 5. a b 10. a b c d

I wish to apply for one hour of category 1 AMA Continuing Medical Education credit through the I.U. School of Medicine. I have read the article and answered the quiz on the answer sheet above. I understand that my answer sheet will be graded confidentially, at no cost to me, and that notification of my successful completion of the quiz (80% of the questions answered correctly) will be directed to me for my application for the Physician's Recognition Award of the American Medical Association. I also understand that if I do not answer 80% of the questions correctly, I will not be advised of my score but the answers will be published in the next issue of INDIANA MEDICINE for my information.

Name (please print or type)

Address

Identification number (found above your name on mailing label)

Signature

To be eligible for this month's quiz, send your completed, signed application before Feb. 10, 1984 to the address appearing at the top of this page.

INVESTORS NEEDED FOR LARGE DAIRY FARM THAT WILL BE CONDUCTING EMBRYO TRANSPLANTS

In embryo transplants the cow can be chemically primed to be in heat and to "super-ovulate," producing several eggs, which are then flushed out in a vacuum process before they adhere to the uterine wall. Fifteen or 20 microscopic eggs may be obtained, though not all may be fertilized.

Using recent technology, breeders can freeze the eggs for future use. They can also split them in half for implantation in more than one surrogate mother, and work is also presently being done on splitting the eggs into quarters, and determining the sex of the embryos, so that breeders can choose whether to implant a male or a female embryo.

The farm that investors are needed for is located in North Central Indiana. There are 1,110 tillable acres, and 255 acres that are non-tillable. The farm has 5 homes, 5 large barns, and many other small barns and sheds. The farm is set up for Dairy and Hog operations.

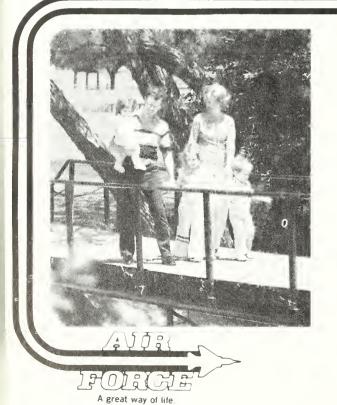
There are obvious tax implications, such as tax credits, stepped up depreciation, and a tremendous amount of profit potential in embryo transplants and Dairy Operations.

FOR MORE INFORMATION CONTACT: GREGORY BALSLEY

RR #4, Box 32,

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NEWS NOTES.

Here and There . . .

- ... **Dr. D. Thomas Mellin** of Elkhart was the keynote speaker at a "Healthy Heart Program" presented in October by Elkhart General Hospital.
- ... **Dr. Donald P. Bixler** of Anderson discussed laser eye surgery during an October health forum sponsored by St. John's Medical Center and the Health Enhancement Institute.
- . . . **Dr. James M. Platis**, a Merrillville plastic surgeon, discussed suction lipectomy on a WBBM-TV program in November.
- ... Dr. Dennis J. Nicholas, an Indianapolis anesthesiologist, has been selected to head President Reagan's reelection campaign in Indiana.
- ... **Dr. John C. Jarrett,** formerly of Marion, has received the Central Association of Obstetricians and Gynecologists' annual national prize for the best paper on Ob-Gyn research.
- ... Dr. Elizabeth L. Sowa, an Evansville ophthalmologist, has been elected president of the Evansville Association for the Blind.
- ... **Dr. John J. Saalwaechter** of Lebanon has been elected president of the board of directors, Tri-County Mental Health Center.
- ... **Dr. Frederick B. Stehman** of Indianapolis has been named a fellow of the American College of Surgeons.
- ... Dr. George H. Rodman, formerly director of Trauma Service at Good Samaritan Medical Center in Phoenix, has accepted assignment as director of Trauma Services at Methodist Hospital, Indianapolis.
- in the Emergency Medical Department of Kaiser Permanente Medical Center in Sacramento, has joined the medical staff of Methodist Hospital, Indianapolis, and will direct the educational programs in Emergency Medical Services.
- ... **Dr. James A. Rang** of Evansville discussed sports injuries during an October PTA meeting at West Terrace School, Evansville.
- ... **Dr. Walter J. Daly**, dean of the Indiana University School of Medicine, has been appointed by Governor Orr to the state Medical Education Board.
- . . . Dr. Donald H. McCartney of Indianapolis has been named by Governor

- Orr to a two-year term on the Committee of Podiatry Examiners.
- ... **Dr. Dean D. Maglinte** of Indianapolis served on the faculty of the Society of Gastrointestinal Radiologists' annual meeting and postgraduate course Oct. 19-23 in Bermuda.
- ... **Dr. Henry E. Montoya** of Indianapolis discussed arthritis during a November meeting sponsored by Winona Hospital and the Indiana chapter of the Arthritis Foundation.
- ... **Dr. Daniel H. Spitzberg** of Carmel discussed cataracts during a November meeting in Carmel of the Indianapolis chapter, Myasthenia Gravis Foundation.
- . . . Dr. James A. Koontz of Vincennes has been named director of the Comprehensive Community Mental Health Center in Vincennes.
- ... **Dr. David J. Powner** has been named director of Adult Critical Care Units, Methodist Hospital, Indianapolis.
- ... **Dr. John E. Pless,** director of forensic pathology, I.U. School of Medicine, discussed "Suicide Scenes" during an October emergency medical seminar in Bloomington.
- ... **Dr. Russell J. Dukes** of Bloomington discussed pulmonary health during a November community lecture sponsored by Bloomington Hospital.
- ... **Dr. Richard A. Schaphorst** of Mishawaka has been elected president of the St. Joseph County Board of Health.
- ... **Dr. Robert E. Hannemann** of Lafayette served on a practice management panel at a recent meeting in San Francisco of the American Academy of Pediatrics.
- ... **Dr. Alfred J. Kobak** of Valparaiso has been elected to membership in the Central Association of Obstetricians and Gynecologists.
- Dean D. Maglinte of Indianapolis exhibited "The 'Seven Pump' Method: A Simplified Barium Pneumocolon Examination" at November's meeting in Chicago of the Radiological Society of North America.
- the Morgan County Hospital at Martinsville since 1974, will become president of the Indiana Hospital Association next month; he succeeds Elton TeKolste, who died in June.

- served as general honorary chairman of the American Lung Assn. of Northwest Indiana's annual Christmas Seal campaign.
- ... **Dr. C. David Ryan** of Columbus discussed pre-menstrual syndrome at a November PMS awareness meeting in Columbus.
- ... **Dr. Paul J. Borgmeier** of Richmond was among panelists who discussed arthritis during a November public forum in Richmond.
- ... **Dr.** William M. Shapiro of Elkhart discussed head injuries at a November meeting in Elkhart General Hospital of the Michiana Head Injury Support Group.
- ... Dr. Charles Fisch of Indianapolis will serve on the faculty of an American College of Cardiology CME course, "Current Concepts in Cardiology—1984." It will be presented in Coronado, Calif., at the Hotel del Coronado, Jan. 31 to Feb. 2.

\$5,000 for Best Fiber Story

The Saturday Evening Post announces a \$5,000 cash award offered by the Benjamin Franklin Society for the story that best motivates people to add watersoluble and water-insoluble fiber to their diets.

Dr. Cory SerVaas, editor of the *Post*, believes it important for the public to know that water-insoluble fiber as found in wheat bran is beneficial in preventing diverticulosis and possibly cancer of the colon besides functioning as a preventive for constipation but does not lower cholesterol. On the other hand, Dr. Ser-Vaas emphasizes, water-soluble fiber, as found in oats and beans, is needed to lower cholesterol but does nothing for constipation.

The object of writing articles on the subject in the public press is to encourage menus and recipes for dishes that are attractive and thereby relieve the population from the burden of eating a mixture of wheat bran, oat bran and beans for breakfast every day. Any article published between Oct. 20, 1983 and July 1, 1984 in newspapers, magazines, house organs or church publications is eligible for consideration.

News from the AMA

- Eighty-six per cent of Americans are satisfied with the nation's health care system, according to a survey by the Health Insurance Assn. of America. The survey showed that the public believes physicians and hospitals are responsible for increases in health care costs. Seventy-six per cent of those surveyed said they think health costs are rising faster than other costs.
- AMA members receive a 10% discount on most books and pamphlets listed in the "AMA Professional Publications Catalog." The discount does not apply to periodical subscriptions, publications available through commercial publishers, and a few other titles. For the catalog, write AMA Order Dept., P.O. Box 10946, Chicago 60610.
- Twenty physician-owned professional liability companies increased rates during the three billing periods since 1980, according to a poll conducted by the American Medical Assurance Co. The average increase over the three years was 47%.
- Twenty more Patient Medication Instruction sheets are now available from the AMA, bringing the total to 60. PMI sheets, bound in pads of 100, are design-

ed to augment oral communications on drug therapy between patients and physicians. The minimum order is 10 pads for \$5, prepaid to AMA Order Dept., P.O. Box 8052, Rolling Meadows, Ill. 60008.

Bibler Professorship

Dr. Otis R. Bowen, Indianapolis, has been named the first Lester D. Bibler Professor of Family Medicine at the I. U. School of Medicine. This is the first endowed professorship in the department of family medicine.

The endowment fund-raising originated in 1979. The fund is still open and will receive further contributions sent in care of the IU Foundation, 355 Lansing St., Indianapolis 46202, marked for the Bibler Fund.

TV CME Series Debuts

Starting this month a new MDTV network will broadcast weekly medical education shows for physicians on commercial TV stations in 50 top U.S. markets. Indianapolis, Cincinnati, Chicago, Louisville, and Detroit will carry the broadcast on either a VHF or

UHF station. The time is either 6 to 6:30 a.m. or 6:30 to 7 a.m.

The first program is titled "Cardiology Today and Your Practice." It will be broadcast monthly on a weekday and rebroadcast once each month in January, February and March 1984. The program has been screened by a medical review board. A seven-city test market in September drew overwhelmingly positive response from primary care physicians.

AMA Fights City Ruling

A city ordinance making electroconvulsive therapy a misdemeanor in Berkeley, Calif. has been invalidated by an Alameda County Superior Court judge.

The AMA and the California Medical Association jointly filed an amicus curiae brief in a lawsuit brought by the American Psychiatric Association and other psychiatric organizations to challenge the ordinance.

In their brief, the AMA and the CMA argued that the ordinance exceeded the city's authority to legislate. The brief also raised arguments relating to the right to privacy and the right to consent to a recognized medical treatment.

Physician Recognition Awards -



The following ISMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned, and is acceptable proof in most states requiring CME in re-registration that the mandatory hours of CME have been accomplished.



Acton, Charles M., Terre Haute Andrews, Ronald K., New Palestine Armbuster, Thomas G., Fort Wayne Barton, Robert F., Angola Bluth, Steven A., South Bend Cheung, Amy A., Indianapolis Clunie, William A., Huntington Cobb, Clarence M., Indianapolis Corkum, Doug J., Bluffton Cronen, Paul W., Madison Donauer, Robert M., Merrillville Feldman, Howard E., Munster Fisher, Henry, Marion Foster, Christopher A., Anderson Gard, Daniel A., Indianapolis Goodman, Julius M., Indianapolis

Grabow, Emil F., Munster Hardin, Stephen L., Martinsville Hawk, Edgar A., Indianapolis Hayhurst, Thomas E., Fort Wayne Hiam, Charles G., Evansville Hicks, George W., Indianapolis Hirsch, Theodore, Connersville Kelly, George G., Munster Kent, Richard N., Fort Wayne Lambert, Destry W., Tipton Lenthall, Ronald C., Zionsville Madrilejo, Roberto B., Valparaiso Miller, Donald C., Cedar Lake Moe, John F., Indianapolis Morris, William H., Munster

Morrison, Lewis E., Indianapolis Nelson, Carl A., West Lebanon Ng, Anastacio C., Indianapolis Peterson, Allen L., Valparaiso Peterson, Ronald L., Plymouth Rea, Ralph L., Greenfield Ress, Gene E., Tell City Schafer, Scott W., Logansport Schloss, Robert P., Fort Wayne Slabaugh, Robert D., South Bend Stucky, Jerry L., Fort Wayne Trachtenberg, Lee H., Munster Van Hove, Eugene D., Carmel Warden, John A., Indianapolis Yolles, Elliott A., Indianapolis Young, Eusebio C., Carmel

NEWS NOTES.

New ISMA Members

The following physicians were welcomed in November as new members of the Indiana State Medical Association:

Michael Ackerman, M.D., Fort Wayne, allergy and immunology

Mark T. Adams, M.D., Fort Wayne, pediatrics

David B. Austin, M.D., Fort Wayne, family practice

Clarence R. Barnett, M.D., Indianapolis, family practice

Mary A. Bieker, M.D., Evansville, internal medicine

Roger E. Brockman, M.D., Indianapolis, diagnostic radiology

Jerrold A. Clark, M.D., Evansville, pathology

David H. Cloud Jr., M.D., Fort Wayne, internal medicine

Eric G. Cure, M.D., Indianapolis, emergency medicine

Edward P. Daetwyler, M.D., Evansville, otorhinolaryngology

Albert V. Emilian, M.D., Fort Wayne, emergency medicine

Bruce J. Hopen, M.D., Fort Wayne, family practice

Gordon R. Huey, M.D., Indianapolis, obstetrics and gynecology

Richard S. Idler, M.D., Indianapolis, orthopedic surgery

Marc E. Kaminsky, M.D., Fort Wayne, radiology



Kevin Kelly, M.D., Fort Wayne, cardiovascular diseases

Pamela Marxen Kelly, M.D., Fort Wayne, infectious diseases

Eric S. Leaming, M.D., Indianapolis, orthopedic surgery

Rao V. P. Mantravadi, M.D., Fort Wayne, oncology

Gregory M. Mielke, M.D., Fort Wayne, family practice

Berry I. Miller, M.D., Fort Wayne, family practice

Deborah L. Miller, M.D., Fort Wayne, family practice

Thomas L. Miller, M.D., Fort Wayne, family practice

Jeffrey K. Moore, M.D., Evansville, dermatology

Steve Musselman, M.D., Akron, family practice

Mark Porter, M.D., Fort Wayne, neurology

James Ranochak, M.D., Fort Wayne, general surgery

John K. Schneider, M.D., 1n-dianapolis, orthopedic surgery

Owen L. Slaughter, M.D., Boonville, emergency medicine

Darryl M. Sugar, M.D., Evansville, internal medicine

Ted E. Troyer Jr., M.D., Evansville, family practice

Suzanne Wehrenberg, M.D., Fort Wayne, family practice

David R. Wells, M.D., Indianapolis, family practice

Carol S. Williams, M.D., Indianapolis, anesthesiology

Stanley D. Wissman, M.D., Fort Wayne, nephrology.

For the Asking . . .

Available to physicians for the asking are:

- "Health and Safety Aspects of Video Display Terminals," a report of the American Council on Science and Health. The report says computer terminals and word processors do not pose a radiation hazard. ACSH says rumors are not true that these devices could cause cataracts. damage to vision, miscarriages or birth defects. The ways this equipment is used in the workplace may be at fault, however, in causing burning or itching eyes, headaches, or back or arm pain. The 24-page pamphlet is available for \$2, with discounts on multiple copies. Write ACSH, 47 Maple St., Summit, N.J. 07901.
- Twenty more Patient Medication Instruction Sheets have been added to the AMA's patient education program on prescription drugs. There are now 60 PMIs available. They include information about what a medication is for, how it is to be taken and possible side effects. Space is also provided for physicians to write the patient's name, dosage and any special instructions. PMIs are bound into pads of 50 and cost \$1 per pad. For information, call Christina West at the AMA, (312) 751-6604.
- "A Physician's Guide to Gearing Up for Retirement," an AMA book published in a loose-leaf binder, covers the usual problems of retirement and emphasizes the concerns that are unique with physicians. It deals with second careers, closing an active practice, selling a practice, estate planning, and changes in daily

living and avocations. \$39.95 plus \$1.50 postage. Write Order Dept., OP133, AMA, P.O. Box 10946, Chicago 60610.

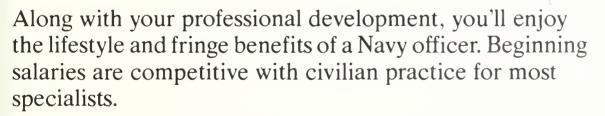
· "America's Health: A Century of Progress but a Time of Despair," is a 30-page report prepared by the American Council on Science and Health. In studying allegations that American health is deteriorating, the council determined that, in fact, Americans are healthier now than ever before. An American born today can be expected to live about 27 years longer than someone born in 1900. In 1900, about 100 of every 1,000 infants born in the U.S. died before their first birthday; today fewer than 12 of every 1,000 infants fail to survive their first year. Complimentary copy available at no cost. Write ACSH, 47 Maple St., Summit, N.J. 07901. Include a stamped, selfaddressed, business-size envelope.

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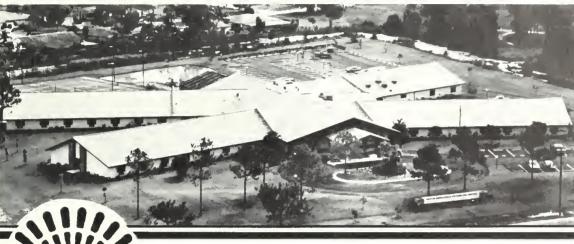
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OBITUARIES.

Bruce A. Work, M.D.

Dr. Work, 75, a Frankfort physician serving as Clinton County health officer, died Oct. 26 at Clinton County Hospital.

He was a 1932 graduate of the University of Michigan Medical School and an Army veteran of World War II.

Dr. Work, a past president of the Clinton County Medical Society, had served as chief of the medical staff at Clinton County Hospital in 1980. He was a member of the American Academy of Family Physicians and the ISMA Fifty Year Club.

Corley B. McFarland, M.D.

Dr. McFarland, 70, a retired South Bend ophthalmologist, died Oct. 20 at his home.

He was a 1940 graduate of the Northwestern University Medical School.

Dr. McFarland, who retired in 1979, was a diplomate of the American Board of Ophthalmology and a member of the American Academy of Ophthalmology.

David B. Silbert, M.D.

Dr. Silbert, 74, a retired Shelbyville physician, died Nov. 11 at Methodist Hospital, Indianapolis.

He was a 1937 graduate of the University of Illinois College of Medicine and was an Army veteran of World War II.

Dr. Silbert retired from practice in 1973.

John F. Wixted, M.D.

Dr. Wixted, 84, a retired South Bend/Mishawaka ophthalmologist, died Oct. 8 at St. Joseph's Medical Center, South Bend.

He was a 1932 graduate of the University of Illinois College of Medicine.

Dr. Wixted, who practiced with his wife, Dr. Julia M. Wixted, retired in 1971. In recent years they lived in Harbert, Mich. He was a member of the ISMA Fifty Year Club.

Laverne B. Hurt, M.D.

Dr. Hurt, 83, a retired Indianapolis physician, died Oct. 10 at Delray Beach (Fla.) Hospital.

He was a 1923 graduate of Indiana University School of Medicine and a Navy veteran of World War II.

Dr. Hurt, who retired in 1961, had lived in Delray Beach in recent years. He was a member of the ISMA Fifty Year Club.

Walter J. Filipek, M.D.

Dr. Filipek, 73, a retired South Bend physician, died Oct. 16 at St. Joseph's Medical Center, South Bend.

He was a 1940 graduate of the Loyola University Stritch School of Medicine. He served as medical director of Bendix Corp. during World War II.

Dr. Filipek, who retired in 1979, was a member of the American Academy of Family Physicians.

Memorials: Indiana Medical Foundation

The Indiana Medical Foundation, Inc. was formed by the Indiana State Medical Association "for religious, charitable, scientific, literary or educational purposes." It provides financial assistance to support the educational mission of Indiana Medicine.

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The Foundation is pleased to acknowledge the receipt of gifts in remembrance of the following individuals:

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H. Harold Rodin, M.D.

Dr. Rodin, 75, a retired South Bend dermatologist, died Oct. 24 at St. Joseph's Medical Center, South Bend.

He was a 1933 graduate of Indiana University School of Medicine.

Dr. Rodin, a former St. Joseph County deputy health commissioner and deputy coroner, was a professor of dermatology at Northwestern University for 20 years; he was named professor emeritus by the university board in 1976. He was a member of the American Academy of Dermatology and was the first president of the Indiana Dermatology Association.

Hargis R. Bush, M.D.

Dr. Bush, 86, a retired Cannelton physician, died Oct. 8 at Perry County Memorial Hospital.

He was a 1924 graduate of the University of Louisville School of Medicine and a Marine veteran of World War I.

Dr. Bush, who retired in 1981, was a past president of the Perry County Medical Society. He was a member of the ISMA Fifty Year Club.

E. F. Jones, M.D.

Dr. Jones, 65, a Rensselaer radiologist, died April 15, 1983, according to the Jasper County Medical Society.

He was a 1948 graduate of the University of Vermont College of Medicine.

Dr. Jones was a diplomate of the American Board of Radiology and was a member of the American College of Radiology, the American Society of Anesthesiologists, and the Society of Nuclear Medicine.

Herbert L. Shroyer, M.D.

Dr. Shroyer, 59, a retired Dunkirk physician, died Nov. 8, according to the Jay County Medical Society.

He was a 1949 graduate of the Wayne State University School of Medicine, Detroit, and was a veteran of World War II.

Dr. Shroyer, a former president of the Jay County Medical Society, was a member of the American Academy of Family Physicians.



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SPORTS MEDICINE: Rehabilitation of the Injured Athlete, March 15, 1984, Westin-Crown Center Hotel, Kansas City, Missouri. Guest speakers: Barbara J. DeLateur, M.D., Univ. of Washington-Seattle, and James H. McMaster, M.D., Univ. of Pittsburgh. Contact Jan Johnston, Office of C.E., Univ. of Kansas Medical Center, Rainbow at Olathe, Kansas City, Kan. 66103. (913) 588-4480.

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STAFF PSYCHIATRIST—Immediate opening for full-time Staff Psychiatrist of a developing community mental health center in western Indianapolis. Specialty in psychiatry, Board eligible, preferably Board certified. Salary competitive, excellent benefits. Contact Edward L. Johnson, Executive Director, Cummins Mental Health Center, P.O. Box 158, Danville, Ind. 46122. (317) 745-5419.

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MIDWEST PAIN SOCIETY 8th Annual Scientific Meeting, "Practical Management of Common Pain Syndromes," March 16-17, 1984, Westin-Crown Center Hotel, Kansas City, Missouri. Guest speaker: Jes Olesen, M.D., Hellerup, Denmark. Contact Jan Johnston, Office of C.E., Univ. of Kansas Medical Center, Rainbow at Olathe, Kansas City, Kan. 66103. (913) 588-4480.

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FAMILY PRACTITIONERS — Excellent opportunity for family practice physicians in Montgomery County, Indiana. Two communities close to Crawfordsville, Indiana, are seeking a physician. Financial assistance is available thru hospital and communities. New 120 bed hospital in Crawfordsville, to open in May 1984. Contact Jim Harness, Assistant Administrator, Culver Union Hospital (317) 362-2B00, Extension 201.

E.N.T. SPECIALIST — Excellent opportunity for Board Eligible or Board Certified E.N.T. physician in Crawfordsville, Indiana. Would be only such specialist in town of 15,000 and in county of 35,000. New 120 bed hospital to open in May 1984. Exceptional financial benefits available thru hospital... to include guaranteed income and rent free office space for first year. Contact Jim Harness, Assistant Administrator, Culver Union Hospital, (317) 362-2800, Extension 201.

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sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meet ing of the American Psychiatric Association, Washington, DC, May 3-7, 1971. 12. Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytime sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. 13. Data on file, Hoffmann-La Roche Inc. Nutley, NJ.

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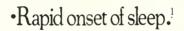
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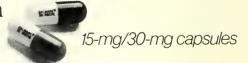
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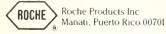
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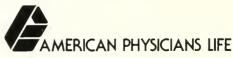
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ABOUT THE COVER

In keeping with Heart Fund Month, this issue features three heart-related articles in the scientific section. Our "What's in a Name?" column (next page) provides several interesting statistics on heart disease, stroke and related disorders.

—Cover by Fred Kinghorn

The American Heart Association

What's in a Name?

EBRUARY is Heart Fund Month. In keeping with that theme, INDIANA MEDICINE is featuring three heart-related articles in the scientific section of this issue.

The American Heart Association is a major health organization of more than two million volunteers dedicated to reducing early death and disability from heart disease, stroke and related disorders. Its leadership includes some of this nation's most eminent scientists, educators and business people.

At a recent press briefing by the AHA and Indiana University's Krannert Institute of Cardiology, physicians outlined three areas of groundbreaking research now being conducted at Krannert with the help of grants from the AHA:

- Finding causes and treatments for irregular heart rhythms.
- Exploring how the body produces energy to keep the heart alive and pumping, and how that production is altered by blockages in the coronary blood vessels.
- Conducting basic research on the nature of blood vessels to determine why such diseases as atherosclerosis occur.

According to Dr. Gregory N. Larkin, a Greencastle physician serving as president of the AHA's Indiana Affiliate, Indiana volunteers gathered enough contributions last year to allow \$380,000 to be directed toward Indiana heart research. During the past 30 years, the AHA has allocated \$390 million in research support.

Everyone benefits from heart research. One such beneficiary, Anna Gardner of Crawfordsville, received the first heart transplant in Indiana on Oct. 20, 1982. Today she is the Indiana Affiliate's honorary state campaign chairman. "I believe we will see more progress in the next few years with the help of the AHA," Mrs. Gardner said. "I am proof that the research works."

One of Indiana's heart researchers, Dr. Charles Fisch, director of the Kran-



nert Institute of Cardiology, recently received one of the highest awards given to heart specialists by the national AHA. He was presented the James B. Herrick Award for helping promote "the development of cardiology from a nearly complete absence in community hospitals to that of a flourishing specialty..."

Research supported by the AHA has contributed to improvements in control of high blood pressure, development of artificial heart valves and pacemakers, new x-ray techniques to help improve diagnosis of heart and blood diseases, improved blood flow measurement in the heart and brain resulting in early detection of disease in the blood vessels, and advances in surgical techniques to repair congenital and acquired heart defects and to provide coronary artery bypass procedures.

Despite progress that has been made, nearly one million Americans still die each year of heart disease, stroke and related disorders. And here are some other mind-boggling facts provided by the AHA:

- Nearly 43 million Americans have one or more forms of heart or blood vessel disease.
- Stroke afflicts more than 1.8 million Americans.
- As many as 1.5 million Americans may have a heart attack this year and about 550,000 of them will die.
- High blood pressure afflicts about
 37 million American adults.
- 1.9 million adults and 100,000 children in America have rheumatic heart disease.
- The economic cost of cardiovascular disease will amount to about \$64.4 billion in 1984.

"We're Fighting for Your Life" is the Heart Association's motto. By expanding research support, determining medical credibility of the findings, and providing this knowledge to physicians, patients and the general public, the AHA continues to fill a tremendous need.

MEDICAL MUSEUM NOTES

CHARLES A. BONSETT, M.D., Indianapolis



HE MUSEUM has medical artifacts numbering into the thousands. Now, thanks to the Priscilla Brown bequest (NOTES, January 1982), and the matching contribution from the Indiana Historical Society, much of this material has been identified and catalogued by Katherine McDonell, curator and Indiana medical historian (NOTES, September 1982) and her volunteer assistant, Helen L. Davidson, former archivist for Eli Lilly Company (now retired).

In order to use this material most effectively, a long-term plan of the Museum is to provide exhibits that can travel throughout the state for display in appropriate areas. The mechanics for doing this have yet to be arranged, but the first exhibit, with the help and funding of the Indiana Historical Society, has been planned, and will soon be opened to the public. It is entitled "Medicine in Antebellum Indiana: Conflict, Conservatism, and Change—A Program on Health and Medicine in Pre-Civil War Indiana."

Nine major themes are covered:

- 1. Sickness and Health. Two display cases are devoted to the overall health of early Hoosiers, and the many diseases and medical problems they faced: milk sickness, "fevers," ague (malaria), cholera, smallpox, and so forth.
- 2. The Physician. Medicine, during the period before anesthesia and the germ theory, has often been termed "heroic." It was heroic in two ways: The physician heroically administered to the sick, and the therapies he used were often harsh or "heroic." One display case focuses on the physician and his practice of medicine, i.e., he traveled to his patients at all hours of the day, over poor roads, received payment in kind rather than cash, and practiced with very limited equipment.
- 3. Heroic Medicine: Therapies. One display case is devoted to the most common therapies of the day: blood letting and purging; and the extent to which they were used in Indiana. Although the ineffectiveness of these techniques had

New Medical Exhibit Ready for Viewing



APPARATUS for bleeding and cupping. The Dr. Wishard mentioned in the note is Dr. William Niles Wishard, Sr. Mrs. Shank was the wife of Mayor Lew Shank of Indianapolis (early 1900s).

been demonstrated as early as the 1820s, they continued in use into the 1860s.

- 4. Surgery. One display case demonstrates the instruments in the practice of surgery. Before the introduction of anesthesia, in 1846, surgical procedures were limited to those of absolute necessity.
- 5. Medical Education. Organized medicine in Indiana has always been concerned and involved with medical education. One display case directs attention to the preceptor system, and to Indiana's early proprietary medical schools.
- 6. **Home or Domestic Medicine.** Two display cases are concerned with this subject. Many individuals resorted to home

remedies at this time, either before or in lieu of going to a physician. Also included is herbal medicine.

- 7. Quackery. Many patients of this period refused the harsh or heroic remedies of the regular physician, and resorted to quack remedies, as offered by the Thomsonians, charlatans, or others. This aspect of Indiana medicine occupies one display case.
- 8. **Patent Medicines.** One case is devoted to these bottled cure-alls, which were very popular during this period.
- 9. The Advent of Modern Medicine. The foundation of modern medicine in Indiana is to be found in activities which occurred during the antebellum period. Two display cases are required to tell the story of the development of medical societies, journals, and hospitals; and of the continuing attention to the advancement of medical education and the development of advanced technology.

Items displayed in this 12-case exhibit include early medical equipment, such as amputation kits, blood letting devices, saddle bags, early diagnostic instruments, rare medical books, prints, newspaper ads, posters, medical school catalogues, diplomas, and so forth. An Exhibit Catalogue has been prepared to accompany the display.

Where and When

This Exhibit will be shown from March 12 through June 30, 1984 in the Indiana Historical Society lobby (third floor of the Indiana State Library Building), located at the southwest corner of North Senate Avenue and West Ohio Street in Indianapolis (immediately west of the State Capitol Building). The hours are 8:30 a.m. to 5 p.m., Monday through Friday.

A special opening reception will be held on Friday, March 23 at 4:00 p.m., the guest of honor being Mrs. Madge E. Palmer (nee Pickard), co-author (with R. Carlyle Buley) of *The Midwest Pioneer: His Ills, Cures, and Doctors,* who recently donated her collection of rare medical books to the Indiana Historical Society Library (NOTES and front cover, March 1983).

WHAT'S NEW?

The 3M Company has a new, easy-to-use, disposable EKG electrode designed for maximum convenience. It is adhesive-backed, conforms well to uneven body surfaces and removes easily and painlessly. It is flat and has a low profile which minimizes chances of detachment by patient movement.

Biosound, the Indianapolis-based subsidiary of Andersen Group, Inc., reports a new surgical tool. Surgiscan is the first surgical imaging system designed for intraoperative use. A small ultrasonic probing device, wired to a TV screen, will determine, for instance, the extent of disease in a coronary artery and will allow a precise decision as to the length of the vessel to be bypassed.

Amko features the Amko Bumm Uterine Curette with a long-lasting sharp stainless steel cutting head on a malleable shaft. Handle and shaft are chromeplated. Sizes 1 through 4, II ¼ " long.

Western Enterprises has an advanced, specially designed oxygen regulator that will permit flowrates lower than 2 liters per minute. Product testing indicates outstanding precision with excellent resistance to creep or drop-off. The regulator is intended for use in hospitals, especially in pediatrics, as well as in the home.

Ayerst has received FDA approval to market Inderal® for reducing the risk of death after heart attack. A nationwide study has shown that Inderal reduces the death rate during the first year after a heart attack by 39%.

Diagnon Corporation has received FDA approval to market its second monoclonal antibody anemia test kit, B12. Diagnon has already marketed its first anemia diagnostic kit, Ferritin. The monoclonal antibody assay is more accurate than preceding assays.

The 3M Company has a complete line of easy-to-use plastic drapes for operating microscopes. Steri-Drape Microscope Drapes come in seven styles. They are color-coded for choosing the right size.

Burroughs Wellcome is introducing Fracrium*, a brand of atracurium besylate. It is a non-depolarizing surgical muscle relaxant indicated as an adjunct to general anesthesia to provide skeletal muscle relaxation during surgery. It may be used in patients with impaired renal, hepatic and circulatory functions.

CMC International announces an addon device which enables a doctor who owns an IBM PC to record a verbal message to a patient and have it played back on command when the patient returns a phone call. The computer, in effect, digitizes the voice, and later speaks it back.

Kodak has a new computerized blood analyzer, the Ektachem 700, which is two to three times more productive than current instruments. It performs up to 25 different tests to measure the level of various substances in blood, urine, spinal fluid and other body fluids. Each test requires only one drop of fluid, which is placed on a dry slide that comes coated suitably for each of the tests performed. The computer is programmable for only the tests desired. The computer storage system provides 20 megabytes of memory, which is 200 to 300 times the capacity of most personal computers and more than 100 times the capacity of other instruments. The Ektachem 700 will be available in mid-1984.

Hewlett-Packard has produced a lowpriced high-accuracy arrhythmia monitoring system based on microcomputer technology. Called the HP 78720A, it provides a compact and quiet means for arrhythmia detection/identification which is cost-effective. It has storage and recall capabilities.

News of what is new in the medical supply industry is composed of abstracts from news releases by book publishers and manufacturers of pharmaceuticals, clinical laboratory supplies, instruments and surgical appliances. Each item is published as news and does not necessarily constitute an endorsement of a product or recommendation for its use by INDIANA MEDICINE or by the Indiana State Medical Association.

Hewlett-Packard announces a new low-priced monitor/terminal which provides complete critical-care information. It is designated HP 78532A monitor terminal. Standard measurements include full-lead ECG, two pressures, as well as one- and eight-hour trends. It is compatible with other HP monitors. One optional interface provides cardiac output and blood-temperature measurement capability via the HP 78552A.

Serono Diagnostics introduces a new test that will accurately detect minute quantities of thyroid stimulating hormone. MAIA Clone TSH₃ is the name of the diagnostic test kit. It is useful in the rapid diagnosis of hyperthyroidism. Also used in diagnosis of hypothyroidism and for monitoring patients' response to therapy.

The new Brentwood Cardimax FX-102 Single Channel ECG is only 10.8" long, 6.5" wide and 1.9" deep. It weighs 3.75 pounds. Completely automatic, it sets calibration voltage, position control, lead switching and sensitivity, and prints a full 12-lead recording. Operates on 120 or 240 VAC or rechargeable power pack for complete portability.

Ciba is introducing a once-a-day iron supplement which utilizes a delivery system that is new to non-prescription pharmaceuticals. Called Slow FETM, it delivers ferrous sulfate to the body in a manner that avoids many of the unpleasant side effects often associated with iron supplements. Slow FE employs a wax-matrix system, in which the drug is contained in a tablet made up of a honeycomb type of wax webbing or matrix. The iron is slowly released in the GI tract.

The Harper-Wyman Company announces a line of Pro-StatTM Electronic Programmable Setback Thermostats which provide scheduling flexibility needed for professional offices. Three models are available for heat pumps or single or dual stage heating and cooling systems. The stats may be programmed for a different schedule of heating or cooling for each day of the week.

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FUTURE FILE

Proctology Seminar

The International Academy of Proctology will sponsor a seminar on "Colonoscopy-Rectal Diseases-Rectal Surgery," May 2-5 at the Hyatt Regency, Indianapolis.

Contact George A. Donnally, M.D., Kendrick Memorial Hospital, 1201 Hadley Road, Mooresville, 1nd. 46158.

Antihistamine Therapy

Antihistamine Therapy—Current Clinical Concepts" is the subject of a symposium on March 7 from 2 to 5 p.m. at the Palmer House, Chicago.

Seven recognized authorities will lecture. The meeting is open to all physicians. There is no registration fee for the symposium or the preceding luncheon.

Any physician wishing to receive an invitation should write or phone Communications Media for Education, P.O. Box 712, Princeton Jct., N.J. 08550—(609) 799-2300.

Organ Transplantation

A symposium on Organ Transplantation is to be conducted by the Montefiore Medical Center in New York City March 22. A dozen world class authorities will discuss the state of their art.

Registration is \$100 for physicians and \$75 for fellows and residents. The program will cover transplantation of bone marrow, pancreatic islet cells, the kidney, pancreas, heart, lung, liver and brain. Six hours Category 1 credit.

To register, write The Montefiore Centennial Series, 111 E. 210 St., The Bronx, New York 10467.

London Meeting

"Endocrinology in Primary Care Clinical Practice" is the subject of a CME meeting in London, England on May 5 to 13. Sponsors are Health Science Seminars and Extended Programs in Medical Education, and the University of California. Write to Cynthia Vaughan, P.O. Box 22023, San Francisco, Calif. 94122.

Indiana University CME

For the Primary Care Physician

Feb. 16—Trauma Care: Basics for Primary Care Physicians—Richmond.

May 8-10—Family Practice Review, Part I.

June 19-21—Family Practice Review, Part II.

For the Specialist

March 21-22—Pediatric Pulmonary. April 9-11—Echocardiography Workshop.

April 25—Arthur B. Richter Conference in Child Psychiatry.

For additional information contact Indiana University School of Medicine, CME Division, 1120 South Dr., Indianapolis 46223—(317) 264-8353.

Hospital Administration

Physicians are progressively becoming more and more involved in administration of hospitals. Also the number of doctors who participate in hospital administration and who are hospital trustees is increasing. In line with this trend continuing medical credits will be granted for nearly one-fifth of the management seminars at the 27th annual Congress on Administration of the American College of Hospital Administrators which meets in Chicago March 6 to 9. One-half day sessions receive 3 Category 1 hours and ½ day seminars receive 1.5 credits.

Radiation Oncology

The National Conference on Radiation Oncology will be conducted by the American Cancer Society June 14 to 16 at the San Francisco Hilton Hotel. For full information, write the Conference in care of the ACS at 777 Third Avenue, New York, N.Y. 10017.

The Journal of the American Medical Association publishes a list of CME courses for the United States twice yearly. The January listing features courses offered from March through August; the July listing features courses offered from September through February.

Evansville Seminars

The Spring Seminar Programs at St. Mary's Medical Center in Evansville are listed below:

Feb. 16, Thursday, 1 to 5 p.m. The Oncology Seminar—Part V "Support Care in Oncology."

March 16, Thursday, 1 to 5 p.m. The Mackenzie Seminar "Infectious Diseases of Women."

April 12, 1 to 5 p.m. The Geriatrics Seminar.

Mood Disorders

"Mood Disorders: Pharmacologic Prevention of Recurrences" will be the subject of a Consensus Development Conference April 24 to 26 at the Masur Auditorium in Bethesda, Md. The sponsors are the National Institute of Mental Health and the National Institutes of Health.

To obtain full particulars, to register, or to receive the Consensus Statement by mail write to Ms. Michele Dillon, 2115 E. Jefferson St., Suite 401, Rockville, Md. 20852.

Cardiac Catheterization

"Update on Cardiac Catheterization—1984" is the subject of a CME course to be conducted by the American College of Cardiology March 8 to 10 in Bethesda, Md. The course is designed for cardiologists with an interest in cardiac catheterization and angiography. Fees are \$375 for members and \$435 for others.

For details, contact Learning Center Program Registrar, 9111 Old Georgetown Road, Bethesda, Md. 20814—(301) 897-5400, ext. 241.

15th Pathology Congress

The International Academy of Pathology will conduct its XV International Congress at the Fontainebleau Hilton in Miami Beach Sept. 3 to 7.

Write the United States-Canadian Division of the Academy at 1003 Chafee Ave., Augusta, Ga. 30904 for full information.



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For more information call or write:

James D. Townsend or Earl W. Williams Professional Account Representatives 8900 Keystone Crossing, Suite 500 Indianapolis, Indiana 46240 (317) 846-7502 or (317) 844-3119

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New information from Office of the Commissioner Indiana State Board of Health 1330 W. Michigan St. Indianapolis, Ind. 46206 317-633-8400

PUBLIC MEALTH NOTES

In 1983, immunization representatives from the Indiana State Board of Health performed an audit of marriage license applications to determine the effectiveness of Indiana's requirement for premarital rubella testing.

Marriage applications from 46 counties were examined during 1983; the total number of females in the audit was 5,300. Status of immunity or susceptibility was recorded for 3,638, or 68.6%, of the sample. Of the records examined 3,045, or 57.5%, indicated immunity as a result of laboratory testing; 216, or 4.1%, had presented evidence of previous testing; and 377, or 7.1%, were identified as susceptibles by the required premarital test. The percentage of susceptibles among those for whom results were known was 10.4%.

Findings Disturbing

One of the disturbing findings of the audit was that 1,662, or 31.4%, had no results recorded. The law exempts females over 50 years of age, religious objectors, and those sterilized; however, 1,182, or 22.3%, of the applications had none of these reasons for exemption listed. The percentage of applications with no results recorded and no explanation offered varied widely from county to county (from 0% to 58%). In six counties more than 50% of the records were in this category, indicating either a high degree of error in recording or noncompliance with the law. In one county, 51% of the applications were listed as religious objectors; in all other counties, the percentage was 10% or under.

Of the susceptibles identified, 104, or 27.6%, were under 19 years of age; 222, or 58.9%, were 20-29 years of age; 35, or 9.3%, were 30-39 years of age; nine, or 2.4%, were 40 or over; and seven, or 1.9%, were of unknown age. There are

Effectiveness of Premarital Rubella Testing

approximately 55,000 marriages per year in Indiana (55,924 in 1982). If the same percentages of susceptibles among the population for whom results are known (10.4%) were applied to total marriages per year, 5,720 susceptible females could be expected to be identified under the law each year, and at least 85% would be under 30 years of age. Since rubella disease (laboratory confirmed) continues to be transmitted in Indiana, such susceptible women in their childbearing years are at risk of delivering infants wih the tragic consequences of congenital rubella syndrome.

Study Compared with 1981

A similar review of marriage records was performed in eight counties in 1981; applications made from Sept. 1, 1980, to Aug. 31, 1981, were examined. A comparison between the two years illustrates that the percentage of susceptibles to known results (10.4%) has remained constant. In 1981 the percentage of susceptibles under 30 years of age was 88.3% of the total susceptibles.

One county was included in both audits. In 1981, 11.1% of females with known status were susceptible; in 1983, the percentage was 12.6%, again indicating continuing risk.

Following the 1983 audit, letters were sent to those identified as susceptibles

and those with no results recorded to determine what action had been taken with respect to their risk. Results are as follows:

Number of letters sent 609

Number (% of responses) 263 (43.2%)

Number (% of responses) 78 (29.7%)

who had been informed of risk

Number (% of responses) 59 (22.4%)

vaccinated as a result of test

Number (% of responses) 12 (4.6%) vaccinated as result of audit letter

This examination of marriage applications demonstrates that susceptibility to rubella among women of childbearing age is significant. Premarital testing for rubella can identify at least 5,000 females of childbearing age per year. The response to audit letters also indicates that most females informed of risk will choose vaccination.

Physicians Have Major Role

The cooperation of physicians is essential in following their patients to make sure that susceptible female patients are informed of risk and vaccinated when appropriate.

Elimination of rubella and of congenital rubella syndrome will require several different approaches, including continuing enforcement of school immunization, college programs, prenatal testing followed by procedures which ensure that susceptibles are vaccinated after delivery, and documented immunity of hospital and other health-care workers. Premarital testing is only one part of our arsenal against a disease so costly in dollars and in suffering. However, this study indicates that it is an important part and can be very effective.

For further information, contact Gordon Chastain, Indiana State Board of Health, Division of Chronic and Communicable Disease Control, 317/633-8424.

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omponent or other sulfonamide-derived drugs

Warnings: Do not use potassium supplements, dietary or otherwise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is needed, potassium tablets should not be used. Hyperkalemia can occur, and has been associated with cardiac irregularities, it is more likely in the severely ill, with urine volume less than one liter/day, the elderly and diabetics with suspected or confirmed renal insutticiency. Periodically, serum K* levels should be determined. Il hyperkalemia develops, substitute a thiazide atone, restrict K* intake. Associated widened QRS complex or arrhythmia requires prompt additional therapy. Thiazides cross the placental barrier and appear in cord blood. Use in pregnancy requires weighing anticipated benefits against possible hazards including fetal or neonatal jaundice, thrombocytopenia, other adverse reactions seen in adults. Thiazides appear and triamterene may appear in breast milk. If their use is essential, the patient should stop nursing. Adequate information on use in children is not available. Sensitivity reactions may occur in patients with or without a history of allergy or bronchial asthma. Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diuretics.

Precautions: Do periodic serum electrolyte determinations (par-

patients with or without a history of allergy or bronchial ashma Possible exacerbation or activation of systemic lupus erythematosus has been reported with thiazide diureitos.

Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids, and during concurrent use with amphotencin B or corticosteroids or corticotropin [ACTH]). Periodic BUN and serum creatinine determinations should be made, especially in the elderly diabetics or those with suspected or confirmed renal insufficiency. Cumulative effects of the drug may develop in patients with impaired renal function. Thazardes should be used with caution in patients with impaired hepatic function. They can precipitate coma in patients with severe liver disease. Observe regularly for possible blood dyscrasias, liver damage, other idosyncratic reactions. Blood dyscrasias have been reported in patients receiving triamterene, and leukopenia, thrombocytopenia, agranulocytosis, and aplastic and hemolytic anemia have been reported with thiazardes. Thiazides may cause manifestation of latent diabetes mellitus. The effects of oral anticoagulants may be decreased when used concurrently with hydrochlorothiazide, dosage adjustments may be necessary. Clinically insignificant reductions in arterial responsiveness to norepineprine have been reported. Thiazides have also been shown to increase the paralyzing effect of nondepolanzing muscle relaxants such as tubocurarine. Triamterene is a weak folic acid antagonist. Do periodic blood studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. Use cauliously in surgical patients. Triamterene has been tound in renal stones in association with the other usual calculus components. Therefore, Dyazide should be used with caulion in patients with histories of stone formation. A few occurrences of acute renal failure have been reported in patients on Dyazide' when treated with indomethacin. Therefore

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of lithium toxicity

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The Medical Treatment of Cardiac Failure Due to Acute Myocardial Infarction

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Abstract

Understanding a patient's underlying hemodynamic problems, coupled with a knowledge of the actions of available medicines, can lead to the design of a logical therapeutic program for cardiac failure, possibly reducing the adverse effects of the medicines. The ultimate goal must remain the identification and implementation of measures to prevent cardiac failure by reducing infarct size.

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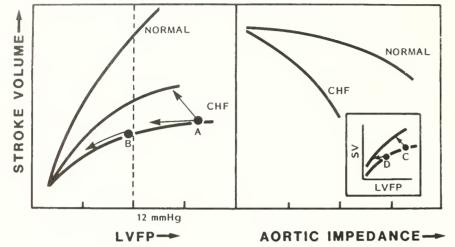
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LTHOUGH THERE has been a decline in overall mortality from cardiovascular disease during the past two decades, acute myocardial infarction remains a leading cause of death in America. The specific complications of heart attack that result in death and disability change in likelihood of occurrence over the course of the infarction process and provide the rationale for dividing the illness into several phases. During the earliest phase, ventricular arrhythmias predominate as a cause of mortality, usually before the patient reaches the hospital. During the hospitalization phase, the major cause of death and disability is acute cardiac failure, which is the focus of this paper.

A number of factors can contribute to the development of heart failure in infarction patients. These include rhythm/conduction disturbances and mechanical lesions such as mitral regurgitation and ventricular septal defect. In most patients, however, the amount of left ventricular muscle damaged by the infarction is the major determinant both of the degree of failure and prognosis. Thus, the ultimate goal is to prevent cardiac failure by limiting infarct size. This goal has, thus far, been difficult to attain to any appreciable degree for most patients. Nonetheless, it provides the basis for some of the routine CCU measures to improve the disparity between myocardial oxygen supply and demand. Intensive investigation is underway to clarify the potential of other protective interventions (including thrombolytic therapy, nitrates, beta-adrenergic agents and selected calcium antagonists) that may reduce infarct size and the risk of infarct extension in selected patients."

Regulation of Cardiac Function

When cardiac failure occurs, its effective treatment requires, first, an understanding by the clinician of the factors that regulate cardiac function and the role of the major compensatory



DETERMINANTS OF CARDIAC PUMPING FUNCTION.² The ventricular function curve shown on the left depicts the relationship of stroke volume and left ventricular filling pressure (LVFP) or preload in normal individuals and in patients with cardiac failure. When LVFP is too high, pulmonary congestion and dyspnea are the major clinical manifestations. When diminished stroke volume is the major hemodynamic change, fatigue and signs of decreased perfusion are predominant. The use of an inotropic drug at point A shifts the curve upward; the use of diuretic agents at A reduces the LVFP (toward B). However, the use of diuretics with normal or low initial LVFP (B) reduces stroke volume. The right panel depicts the relationship of stroke volume and aortic impedance (or resistance to ventricular emptying). The ventricular function curve in the inset shows the effect of reducing impedance (upper curve) by vasodilators. These drugs increase stroke volume when LVFP remains satisfactory (C) but reduce it when LVFP is low (D).

mechanisms (e.g., chamber dilation and sympathetic nervous system stimulation) in the hemodynamic changes associated with the failure state.² In the intact heart, the pumping performance of the ventricle is regulated by four major control mechanisms: (a) the length of the muscle fibers at the onset of contraction (preload); (b) the myocardial wall tension developed during contraction (afterload); (c) contractility; and (d) the heart rate. The manner in which these factors affect cardiac output in normal individuals and in patients with cardiac failure is depicted in the *Figure*.

In the normal heart, an increase in preload through increased venous return to the ventricle leads to the ejection of an augmented stroke volume. In the left panel of the *Figure* this is represented as the relationship of stroke volume and left ventricular filling pressure (similar

to the left atrial pressure). The utilization of this mechanism to improve stroke volume is one of the compensatory changes invoked during heart failure. Unfortunately, the decrease in contractility of the failing ventricle results in a ventricular function curve that is not only displaced downward but is also less steep. Thus, the increase in stroke volume elicited by the increased preload is attenuated. It often occurs at the expense of lung congestion as the left atrial and pulmonary venous pressures rise.

The magnitude of ventricular afterload is determined by several factors including ventricular chamber size and wall thickness. An important component of afterload is the aortic impedance or dynamic resistance to ventricular ejection. The aortic impedance, in turn, is largely determined by the systemic vascular resistance (i.e., the degree of

arteriolar vasoconstriction). In the normal heart, stroke volume is decreased only slightly as the aortic impedance is increased (right panel, Figure). By contrast, the damaged ventricle often is exquisitely sensitive to changes in outflow resistance. A substantial reduction in stroke volume can ensue when the aortic impedance is increased. Such a situation occurs in patients with advanced heart failure in whom the level of systemic vascular resistance is characteristically increased, as a result of heightened sympathetic nervous system activity and, in some patients, by activation of the renin-angiotensin system. The increased vascular resistance, which acts to maintain blood pressure and perfusion of critical organs, may exert deleterious effects in the patient with myocardial failure. Conversely, vasodilating drugs that act directly to reduce systemic vascular resistance can improve ventricular function as long as satisfactory perfusion pressure is maintained. The application of this concept is a major recent advance in cardiovascular therapy.3 It is particularly advantageous since it offers a means of improving cardiac output without relying on an increase in the intrinsic contractile function, and thus oxygen consumption, of the heart muscle.

The heart rate exerts direct and indirect effects on cardiac function and, along with contractility and ventricular wall tension, is a major determinant of myocardial oxygen demand. A compensatory increase in heart rate is often more prominent in acute than in chronic cardiac failure. Unfortunately, an inordinate increase in the heart rate can worsen cardiac function if the myocardial oxygen requirement is increased to levels that precipitate further myocardial ischemia.

The above paragraphs have focused on the systolic function of the damaged left ventricle. There are important alterations of diastolic function also. A decrease in compliance of the ventricle appears to be a major pathophysiologic change of myocardial infarction. This contributes to an increase in left ventricular (and left atrial) diastolic pressure. Indeed, a higher-than-normal pressure (preload) may be required to fill the "stiff" or noncompliant ventricle and thus obtain the optimal stroke volume.

The medications available to treat cardiac failure in acute myocardial infarction include diurctics, vasodilators, and sympathomimetic drugs. Their effects on cardiac function are depicted also in the Figure. The treatment regimen must be individualized for each patient. The role of digitalis has been controversial.4 The controversy results from the drug's limited ability to improve overall cardiac function in acute infarction and from the risk of drug toxicity which may be increased in this setting. All things considered, we generally do not initiate digitalis therapy for its inotropic effect during the acute stages of myocardial infarction (it is often added later in patients with persistent failure). However, digitalis is used to control some of the recurrent or sustained arrhythmias (e.g., atrial fibrillation) that frequently complicate acute myocardial infarction.

Recognition and Treatment of Cardiac Failure

The clinical signs of cardiac failure commonly result from pulmonary congestion or from diminished cardiac output (the hypoperfusion leading ultimately to cool extremities, oliguria, weakness and hypotension). In many patients, evidence both of congestion and decreased perfusion are present. Patients with acute myocardial infarction exhibit a wide spectrum of clinical manifestations, ranging from the patient whose findings are limited to a mild increase in heart rate and soft S, gallop to the patient with shock. At times, extensive ventricular dysfunction can exist with only very subtle clinical evidence of heart failure.5 The heart rate can provide an early clue to cardiac failure in some patients. The presence of resting sinus tachycardia should always arouse suspicion on the part of the clinician and evoke a careful re-examination and review of potential causes of the tachycardia, including cardiac failure (as

well as hypovolemia and pericarditis).

Frequently, acute myocardial infarction results in pulmonary congestion or frank pulmonary edema in the early stages. In addition to supplemental oxygen as needed and morphine to relieve the initial pain of the infarction, the treatment has traditionally focused on the intravenous administration of furosemide. It is important to emphasize, however, that the excessively elevated left ventricular filling pressure and resultant pulmonary congestion at this stage are due in part to the sudden decrease in ventricular compliance caused by the infarction and to the redistribution of blood volume, rather than a marked increase in total body fluid. It is not surprising, therefore, that there is a risk that excessive diuresis can lead to suboptimal preload for the noncompliant ventricle, further diminishing stroke volume. The goal is to lower left ventricular filling pressure to levels that do not cause pulmonary congestion but still adequately fill the ventricle.

When pulmonary congestion is severe, or does not respond satisfactorily to diuretic agents, or when evidence of diminished perfusion predominates, additional therapy is required to improve patient's symptoms and hemodynamic status. For these patients, we generally recommend hemodynamic monitoring (with the Swan-Ganz catheter) and the use of inotropic or vasodilator drugs. Before considering these agents, it must be emphasized that cardiac failure is not the only cause of hypoperfusion or diminished blood pressure. Hypovolemia also can lead to a reduction of cardiac output in some patients with acute myocardial infarction. As indicated above, relative hypovolemia can result from the requirement of the noncompliant ventricle for a higher than normal filling pressure. A negative fluid balance due to vomiting and diminished intake contributes in some patients to absolute hypovolemia as well. In many cases, hypovolemia can be properly identified by clinical assessment (including an analysis of recorded fluid balance and careful examination to

confirm that signs of overt pulmonary congestion are absent) and effectively treated by fluid administration. Careful and repeated examination of the patient is required after a fluid challenge for suspected hypovolemia. A resultant reduction in the degree of sinus tachycardia, the stabilization of blood pressure, an increase in urine output and the absence of any evidence of worsening of pulmonary function support the clinical impression of previously suboptimal left ventricular filling pressure. In some cases, the signs suggesting hypovolemia are inconsistent. This occasionally occurs, for example, in patients who have previously been treated with potent diuretics and is complicated by the fact that a lag can occur between the reduction of filling pressure by these drugs and some of the clinical indicators (including chest x-ray) used to assess intravascular volume. When the clinical indices of intravascular volume are inconsistent, the adequacy of preload can be more precisely assessed by use of bedside hemodynamic monitoring with the Swan-Ganz balloon tip catheter.

The choice between vasodilating drugs or sympathomimetic inotropic agents for cardiac failure depends on several factors.3 The arterial blood pressure often plays a central role in the selection. Our approach² is to use vasodilators for patients with severe heart failure when the initial blood pressure is maintained at satisfactory levels but to select sympathomimetic drugs for patients whose cardiac failure is complicated by hypotension. The presence of certain mechanical lesions provides an additional reason to consider vasodilator therapy. In patients with mitral regurgitation or ventricular septal defect, the regurgitant or shunt flow is a direct function of the systemic vascular resistance. The use of an arteriolar vasodilator to lower aortic impedance favors forward flow.

Sodium nitroprusside is the parenteral vasodilator with which there is the greatest experience. It acts directly to dilate both venous and arteriolar vascular beds. The resulting decreases in the excessive preload and peripheral vascular

resistance improve pulmonary congestion and stroke volume. Heart rate, although usually unchanged, may decrease if there is significant hemodynamic improvement and care is taken to avoid excessive lowering of the systemic arterial and ventricular filling pressures. Unfortunately, even for the patients who initially respond favorably to vasodilators, the long-term prognosis remains poor, attesting to the extent of myocardial damage underlying severe cardiac failure. Controlled prospective studies to assess the effect of vasodilator treatment on mortality from cardiac failure complicating acute myocardial infarction are limited and do not provide conclusive evidence that mortality is reduced.7,8

It is our belief that the use of parenteral vasodilators to reduce symptoms and improve hemodynamics in patients with severe heart failure due to acute myocardial infarction requires bedside hemodynamic monitoring. This technique allows continuous measurement of right atrial and pulmonary artery pressures. Inflation of the catheter balloon tip provides estimation of the pulmonary wedge (or left ventricular filling) pressure. Serial determination of cardiac output is done by the thermodilution method. From these measurements, a number of hemodynamic parameters (e.g., vascular resistances) can be calculated. Blood samples can be obtained readily also for measurement of oxygen content. In all cases, the information from hemodynamic monitoring must be interpreted along with (rather than in the place of) the findings from the physical examination of the patients.

For the patient with severe heart failure and satisfactory blood pressure, nitroprusside is administered intravenously by infusion pump, beginning with $10\text{-}20~\mu\text{g/min}$ (for details see ref. 2 or 7). The dosage is gradually increased until the filling pressure is reduced to 18-20 mmHg and perfusion is enhanced to acceptable levels. The optimal dosage varies considerably. For many patients, the dosage of nitroprusside is limited ultimately by a fall in systemic arterial

pressure. Careful and continuous monitoring of the blood pressure is required to avoid hypotension which can occur precipitously. Hypotension is particularly dangerous since the blood flow across a critically obstructed coronary artery is dependent on the perfusion (blood) pressure. In the presence of marked vasoconstriction, the auscultatory method of blood pressure determination can be artifactually low. For this reason, arterial cannulation is often required. The minimum safe level of blood pressure is not known precisely and probably is different in individual patients. As a general rule, systolic blood pressure should not be allowed to drop significantly below 100 mmHg, although at times patients with borderline pressure and intense peripheral vasoconstriction will respond favorably to nitroprusside without a further drop in blood pressure. The patient's pre-infarction blood pressure must also be taken into account when estimating the lowest acceptable pressure. For patients with low output despite nitroprusside treatment, the addition of dobutamine or dopamine in low dosages may further improve cardiac function. After stabilization, an attempt to wean the patient from nitroprusside and institute oral vasodilator therapy (e.g., nitrates, hydralazine, or captopril) can be undertaken.2

Intravenous nitroglycerin9 also has been used to treat cardiac failure due to acute myocardial infarction and is preferred by some (including the author) over nitroprusside unless there is marked peripheral vasoconstriction or associated hypertension. Moreover, some studies suggest that nitroglycerin, in contrast to nitroprusside, acts directly to increase perfusion of the ischemic myocardium.10 Nitroglycerin decreases left ventricular filling pressure to a greater extent than it lowers systemic vascular resistance and, consequently, the drug is most commonly used in patients with heart failure to provide relief of pulmonary congestion. Cardiac output usually improves somewhat also. As with all vasodilators, it is essential that systemic arterial and left ventricular filling pressures remain satisfactory in order to avoid reflex tachycardia and worsening of myocardial ischemia. The intravenous infusion of nitroglycerin is usually begun at $10-15~\mu g/min$ and gradually increased until the desired hemodynamic changes occur or the treatment is limited by a fall in blood pressure or rise in heart rate.

Sympathomimetic agents offer an alternative or additional approach to the treatment of severe cardiac failure. In the presence of significant hypotension, they constitute the medical treatment of choice. In this case, it is hoped that they can be used in dosages that restore adequate blood pressure by increasing the heart's pumping action (inotropic effect) rather than by further increasing vascular resistance (vasoconstriction). As cardiac pumping function is improved, excessive ventricular filling pressures and the degree of lung congestion may be reduced as well. In the setting of coronary artery disease, the decision to use a specific catecholamine to increase contractility must include consideration of its potential to induce sinus tachycardia and increase systemic vascular resistance: changes that increase myocardial oxygen demand and can worsen ischemia. Largely because of these considerations, dopamine and dobutamine have become the catecholamines used most commonly for the treatment of cardiac failure, unless a strong vasoconstrictor effect is required to maintain systemic arterial (and coronary perfusion) pressure. In the latter circumstance, norepinephrine may be required.

When administered in low doses (<5 μ g/kg/min), dopamine increases cardiac output and renal blood flow with little change in heart rate and vascular resistance. At higher doses, alpha-adrenergic effects begin to predominate and systemic vascular resistance increases. The heart rate increases as well with higher doses. For patients with refractory cardiac failure but satisfactory blood pressure, dopamine treatment is initiated with a low dose (1.0 - 3.0 μ g/kg/min) intravenous infusion. The dose is gradually increased until a

satisfactory response has occurred or until the heart rate or indices of systemic vascular resistance increase. In patients with hypotension, higher initial doses may be required. Dopamine (and dobutamine) therapy can result in supraventricular and ventricular arrhythmias. Their emergence requires reduction or discontinuation of the drug.

Dobutamine (usual dose 2-10 μg/kg/min) appears less likely than dopamine to increase heart rate when given in dosages that enhance myocardial contractility. Ventricular arrhythmias also may occur less frequently. Although dobutamine lacks dopamine's direct vasodilator action on the renal vasculature, the alpha-adrenergic vasoconstrictor effect seen with higher doses of dopamine also is less prominent. Taken together, the actions of dobutamine should limit myocardial oxygen demand to a greater extent than dopamine. When used to treat normotensive patients with cardiac failure due to ischemic heart disease, it is preferred by the author over dopamine.

Dopamine is preferred over dobutamine for hypotensive patients who require some peripheral vascular constriction to obtain a satisfactory perfusion pressure. When marked hypotension is present, norepinephrine infusion may be required to maintain adequate blood pressure. The lowest effective dose of the drug should be used in order to avoid excessive vasoconstriction and the emergence of ventricular arrhythmias.

Mitral Regurgitation Associated With Acute Myocardial Infarction

Mitral regurgitation due to papillary muscle dysfunction is common in patients with acute myocardial infarction. In most cases, the degree of regurgitation is mild and does not contribute significantly to hemodynamic decompensation. At times, however, the regurgitation is severe and leads to worsening of cardiac failure. Mitral regurgitation due to myocardial infarction is most severe and dramatic in onset when it results from rupture of an ischemic papillary muscle. Death often ensues rapidly

following rupture of the papillary muscle unless (or even if) intra-aortic balloon pumping and emergency surgery can be performed. The sudden hemodynamic decompensation of a previously stable patient with acute infarction should arouse suspicion of the development of a complication such as severe mitral regurgitation or other mechanical lesion such as rupture of the ventricular septum.

The diagnosis of mitral regurgitation can usually be made readily by auscultation. Assessment of its severity is sometimes more difficult especially in the patient with advanced heart failure. The beneficial actions of nitroprusside therapy for significant mitral regurgitation were described above.

Ventricular Septal Defect Due to Acute Myocardial Infarction

Rupture of the muscular ventricular septum can occur in patients with anterior or inferior myocardial infarction and usually produces a harsh holosystolic murmur and severe cardiac failure. The murmur is similar in character to that of mitral regurgitation (and may be difficult to distinguish from it) but typically is maximal at the left sternal border where a thrill may be present. The diagnosis can be confirmed by using the Swan-Ganz catheter to detect a "stepup" of blood oxygen content when samples from the right atrial and pulmonary artery ports of the catheter are compared. Emergency surgery is often required after an attempt at stabilization with nitroprusside or intraaortic balloon pumping.

Right Ventricular Infarction

This complication of inferoposterior infarction can occasionally lead to severe right heart failure with or without hypotension. The jugular venous pressure is elevated and its contour may include a prominent y descent. It is important to recognize right ventricular infarction since diuretic therapy can worsen the function of the left ventricle, the filling pressure of which may be normal or low despite clinical evidence of elevated right-sided pressures. The

limitations of jugular pressure as an indicator of left sided filling pressures are well known and are particularly evident when there is primary damage to the right ventricle, e.g., right ventricular infarction. Characteristic ECG and hemodynamic monitoring changes can aid in the recognition of this disorder. Fluid administration to maintain left ventricular filling is often successful in treating low output and hypotension due to right ventricular infarction.

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Radiation Induced Amaurosis Fugax

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ROLONGED SURVIVAL following radiotherapy is now becoming common. As a result, more and more patients are presenting with long-term side effects of radiotherapy. Radiation induced atherosclerosis is one of the most predictable of these side effects, and several case reports have described post-irradiation stenosis or occlusion of the carotid, vertebral, subclavian, mesenteric, coronary, iliac, and femoral arteries.

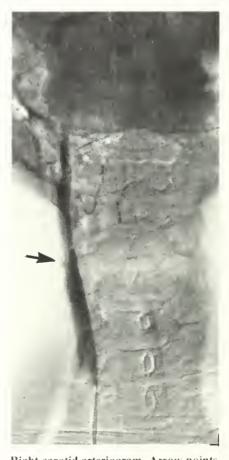
This paper reports an unusual type of irradiation induced atherosclerosis—a non-obstructive ulcerative plaque, which caused crescendo amaurosis fugax in a 38-year-old woman. The general problem of radiation induced carotid disease is important, as about 25% of patients still alive more than five years following cervical irradiation harbor carotid lesions that can be identified by non-invasive means.²

Case Report

A 38-year-old white female schoolteacher re-entered Deaconess Hospital because of medically refractory, progressively frequent episodes of amaurosis fugax involving her right upper visual field.

At the age of 19, she developed Hodgkin's disease, which presented as a right neck mass. She was initially treated with 250 KV x-ray and was given 1,500 r (air dose) to both sides of the neck and mediastinum in 1963. In 1968, the disease recurred, and she was treated

with Cobalt 60 and was given a 4,500 rad exposure dose to the right neck, a 4,500 rad exposure dose to the anterior mediastinum, and a 3,000 rad exposure dose to the right axilla. In 1969, a retroperitoneal perinephric recurrence was treated with Cobalt. In the spring of 1974, after a left neck recurrence, both sides of the neck were again radiated with 4,000 rad. A node then appeared in the left axilla and another in the right groin. Both were treated with additional radiation therapy. In



Right carotid arteriogram. Arrow points to an ulcerated plaque, which was the source of medically refractory amaurosis fugax.

December 1974, mediastinal recurrence necessitated treatment with chemotherapy (MOPP program).

After surviving a bout of radiation gastroenteritis, she developed a hot thyroid nodule treated with partial thyroidectomy in 1975.

The past history and review of systems were not remarkable except for chronic anemia. Social history revealed that she had never smoked tobacco. Other risk factors, such as a high serum cholesterol, high blood pressure or diabetes were not present. Her family history was positive for hypertension in one brother and one sister, and her father had diabetes. Medications included Persantine, 100 mgs. q.i.d., aspirin 10 grains b.i.d., Premarin 1.25 mg. q.d., Provera 10 mg. q.d. five days per month, and Synthroid 0.1 mg. daily.

On physical examination, positive findings included a Grade II systolic ejection cardiac murmur heard best at the apex, absent right axillary, brachial and radial pulses, and a well healed thyroidectomy scar. Her neck was quite thin, similar in appearance to patients who have had radical neck dissections. The carotid artery on the right side was easily palpable just under her skin. A faint carotid bruit could be heard bilaterally. On protrusion, her tongue deviated slightly to the right side.

Laboratory data revealed a normal EKG, a normal echocardiogram, and a normal stress EKG test. Chest x-ray showed fibrotic scarring in the right apex and lateral portion of the left upper lung. The hemoglobin was 10.9, hematocrit 31.4, and white blood cell count 5,200. Non-invasive Doppler studies confirmed the occluded right axillary artery. No abnormality of the carotid artery could be detected non-invasively. However, angiography revealed a 2 mm. ulcerated plaque of the carotid bulb (See Figure). Collateral refill of the right brachial

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artery distal to the occluded right subclavian artery was observed.

A right carotid endarterectomy was performed without incident. No normal dissection plane (as normally seen in typical atherosclerotic disease) was found, but the ulcerated area could be scraped clean. A Gortex patch was used to repair the artery because it was very thickened and fibrotic. Post-operatively, the patient has done well and has had no recurrence of amaurosis fugax in the two years that she has been followed since her surgery.

Discussion

One other patient with post-irradiation amaurosis fugax and a non-obstructive ulcerated plaque of the internal carotid artery has been reported.² Late onset obstructive carotid artery disease in survivors of cervical irradiation is more common. More than a dozen different medical centers, as reviewed by Elerding *et al*, have reported such cases.² The actual symptomatic incidence of this late complication following radio-therapy is

unknown. Silverburke compared his nine patients suffering from radiation induced carotid stenosis with 40 control patients with carotid disease. He found a statistically significant lower age and less coronary and peripheral vascular disease in the irradiated group.⁸

The irradiated patients also displayed carotid stenosis in unusual locations, mostly above or below the carotid

bifurcation.

Carotid endarterectomy, while technically challenging, has been a quite successful method of treating these patients. An increase in peri-arterial fibrosis, difficult tissue planes and poor cleavage between the plaque and the media are to be expected. No increase in morbidity or mortality has been reported following surgical therapy. 8,9

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Congenital Heart Disease in Adults

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ONGENITAL HEART DISEASE is a structural abnormality of the heart which has presumably been present since birth. Congenital heart disease accounts for approximately 1% to 2% of all cases of organic heart disease. The overall incidence of congenital heart disease is placed at about three per 1,000 at birth and one per 1,000 at 10 years of age. However, it has been stated that only 27% of patients with congenital heart disease live to be 20 years of age or older and only 10% will live to be 50 years of age.

It is, therefore, imperative that the clinician be aware of the presence of congenital heart disease in his patient if the proper medical or surgical treatment is to be instituted. Post-pediatric survival occurs as a result of natural selection or operative intervention. Palliative or corrective surgery is now possible in almost all—even the most complex—anomalies, so that survival patterns have been significantly affected.

We are, therefore, confronted with a changing population of patients with congenital cardiac malformations, a

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population that requires an understanding of the basic disorders as well as their surgical modifications. Operation may not only increase life span in patients with anomalies that have a natural tendency to adult survival, but may also permit increasing numbers of patients with disorders previously fatal in infancy or early childhood to reach adult life.

Common cardiac defects with expected adult survival include the following: functionally normal bicuspid aortic valve; valvular aortic stenosis and/or regurgitation; coarctation of the aorta; valvular pulmonic stenosis; atrial septal defect of the ostium secundum type; patent ductus arteriosus; ventricular septal defect; and ventricular septal defect with pulmonic stenosis (Fallot's tetralogy).

The incidence of congenital bicuspid aortic valve, diagnosed by angiography, echocardiography or necropsy, has been estimated to approach approximately 2% of the population. If this estimate is correct, it means that bicuspid aortic valve is the most common congenital malformation of the heart or great vessels; it also means, paradoxical though it may seem, that the most common congenital defect is most prevalent in adults. A bicuspid aortic valve may remain normal and be found as an incidental finding at necropsy or it may become thickened, fibrotic, calcified and stenotic or, less commonly, through a mechanical fault, may result in acute severe aortic regurgitation.

Although ventricular septal defects are the most common congenital heart defects found in infants and children, they are relatively uncommon in the adult population, especially beyond the age of 40 years. The reason for the relative paucity of ventricular septal defects in adults is not entirely clear. Several cases of spontaneous closure of a ventricular septal defect in infancy have been reported. Whether adult patients

have spontaneous closure of their defects, are lost to follow-up or die, remains an enigma to most adult cardiologists. It should be stated that it is quite rare to find an isolated ventricular septal defect as an incidental finding at autopsy.

From a practical and clinical standpoint, atrial septal defect of the secundum type remains the most common congenital cardiac lesion in the adult, especially after the age of 40 years. It has been suggested that a significant number of atrial septal defects are not recognized in infancy and childhood and the diagnosis is made only in adult life. This probably represents a combination of smaller left-to-right shunting in infancy due to a slightly elevated pulmonary vascular resistance, lack of symptoms at this early age, and frequent confusion between the pulmonary flow murmur of an atrial defect and a functional (innocent) heart murmur.

Since the average age of death in patients with atrial septal defects is 35 to 40 years, and since it is well known that these patients deteriorate with the onset of heart failure and/or cardiac arrhythmia, some authors feel that surgical closure of every detectable, uncomplicated atrial septal defect of the secundum type is justified. The surgical mortality and morbidity in these patients is certainly minimal and acceptable.

Adults with persistent patent ductus arteriosus and coarctation of the thoracic aorta with systemic hypertension have been considered good surgical candidates at a low risk. Symptomatic adults with pulmonic stenosis who have pressure gradients across the pulmonic valve greater than 70 mm Hg with radiographic evidence of cardiomegaly and electrocardiographic criteria for right ventricular hypertrophy usually benefit from simple pulmonic valvulotomy. Unless a ventricular septal defect is associated with

cardiopulmonary symptoms, cardiomegaly, electrocardiographic abnormalities or hemodynamic evidence of a pulmonary-to-systemic flow ratio of greater than 2 to 1, it is best treated conservatively with close follow-up.

It is well known that tetralogy of Fallot (ventricular septal defect with pulmonic stenosis) is the most common form of *cyanotic* congenital heart disease seen in adults. In the past, the creation of a palliative shunt between the subclavian artery and pulmonary artery, as developed by Blalock and Taussig, has been the treatment of choice for most patients with tetralogy of Fallot. However, with the advent of cardiopulmonary bypass and recent advances in cardiovascular surgery, total repair of the multiple defects of Fallot's tetralogy is presently advocated.

Although Fallot's tetralogy is the most common of the cyanotic congenital heart defects seen in the adult, the addition of Eisenmenger's syndrome (pulmonary hypertension with reverse flow), severe pulmonic stenosis with reverse flow at the atrial level and pseudotruncus comprise the four major cyanotic cardiac conditions seen in adults. Pulmonic

stenosis with a right-to-left shunt through an atrial septal defect also responds quite nicely to pulmonic valvulotomy. At present, cardiac surgery is considered contraindicated in all patients with severe pulmonary hypertension with reverse flow (Eisenmenger's syndrome or complex). Pseudotruncus, tricuspid atresia and truncus arteriosus do not readily lend themselves to complete surgical repair but palliative procedures are possible.

The decision for proper treatment in adults with congenital heart disease can be made only after a complete cardiac diagnostic evaluation with proper history, physical examination, electrocardiogram, chest x-ray, echocardiogram, and various ancillary cardiac procedures. The definitive diagnostic evaluation for the proper anatomic, pathophysiologic and hemodynamic disturbance is almost dependent on complete cardiac catheterization with angiography.

The age range of patients with congenital heart disease is steadily increasing because of palliative and corrective surgery. Physicians who care for this new population of patients with congenital cardiac disorders must understand the

natural survival patterns before they can understand the effects of operative intervention.

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Emergency Airway Management: Part 2

Critical Care Medicine

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A review of the skills and devices needed for invasive emergency airway management...

N THE FIRST PART: of this discussion of emergency airway management the diagnosis of airway obstruction as well as the equipment and techniques necessary for its non-invasive treatment were reviewed. Those basic skills must be mastered by all physicians. Under some circumstances, however, special needs for positive pressure ventilation may exist or airway obstruction of a severe degree may persist, thus requiring more aggressive or invasive therapy to assure airway patency.

Support for the patent airway and separation of the larynx from the esophagus to protect against aspiration in an unresponsive patient may be provided by an esophageal obturator airway (EOA) introduced through the patient's mouth into the esophagus (Figure 1).

The occluded end of the obturator in the esophagus and the inflated circumferential balloon around the obturator tip completely obstruct the esophageal lumen and prevent emesis. Ventilation is possible either spontaneously by the patient around the obturator to the unobstructed larynx or may be supplied through the obturator to the posterior pharynx and airway via several lateral holes in the proximal obturator wall.

If total or assisted ventilation is required, a special mask is used with the EOA to assure a complete seal between airway and bag resuscitator. Insertion of the EOA is performed with the patient in the supine position. The patient's mouth is opened using one of the techniques described in Part 1, the patient's neck is slightly flexed if allowable and the jaw is pulled forward. The EOA is then advanced to the right of the tongue along the posterior pharyngeal wall. The

goal is to place the obturator cuff in the esophagus distal to the adjacent tracheal carina. Therefore, the actual distance the EOA should be advanced will vary in different patients and is generally unknown.

Once positioned and before the obturator cuff is inflated the mask is quickly applied, ventilation given and the chest auscultated for gas entry. If breath sounds are not heard, a tracheal intubation may have occurred and the EOA is removed and re-inserted. When lung ventilation is achieved the EOA cuff is inflated with 30-35 cc of air. Prior to the subsequent EOA removal or deflation of the EOA cuff, endotracheal intubation should be performed to protect the trachea from possible aspiration of accumulated stomach contents in the esophagus.

Once the airway is assured, the cuff may be deflated and the EOA removed. Frequently, stomach contents which have been held in the esophagus will then enter the pharynx so that suctioning will be necessary. Rarely, the patient may have regained consciousness with the EOA in place and may be able to protect the airway from aspiration so that the EOA can be removed without endotracheal intubation.

The EOA is efficacious? in providing adequate oxygenation and carbon dioxide removal although its superiority over face mask ventilation has been questioned. Modifications in the EOA to permit gastric emptying through the obturator and an esophageal-pharyngeal obturator airway have been reported. Complications of EOA use include inadvertent tracheal intubation, pharyngeal or esophageal injury or perforation, laryngospasm, occlusion of the adjacent

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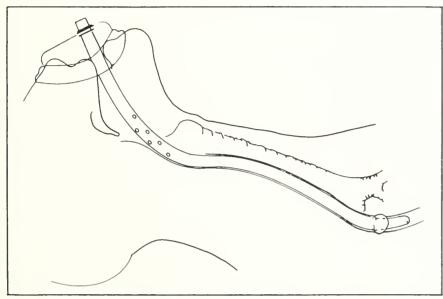


FIGURE 1: Esophageal obturator airway placement.

trachea by the inflated esophageal cuff, and aspiration following cuff deflation.³

Positive pressure ventilation applied to the mouth or pharynx via mouth-to-mouth, mouth-to-nose or mask-resuscitator techniques have been discussed. Resuscitators powered by compressed dry gas, usually oxygen, may also be utilized and allow an assisted inspiration to be initiated either by the patient or manually by the operator. These devices require a high pressure gas source such as an oxygen cylinder but may be used with a face mask, EOA, or endotracheal tube.

Application with a face mask usually requires both hands for maintaining a seal between the mask and the patient and so a resuscitator type which allows manual operation from the mask should be chosen. High gas flow rates are possible from such devices, thus allowing a short inspiratory time which may be of advantage during cardio-pulmonary resuscitation but which may also create a high gas pressure in the pharynx. Disadvantages include the dependency on a compressed gas source, delivery of dry non-humidified gas, and inability to "feel" or monitor airway pressure.

A major complication associated with all the above techniques which deliver

positive pressure ventilation to the pharynx is gastric insufflation and distention with the attendant risk of stomach rupture, emesis, and aspiration.

Percutaneous Translaryngeal Access to Airway

Under some circumstances an adequate airway cannot be secured by any of the methods previously described. A percutaneous technique through the cricothyroid membrane should then be considered. The cricoid membrane lies between the laryngeal and cricoid cartilages. Immediately below the laryngeal cartilage, the antero superior aspect of which forms the laryngeal prominence or "Adam's apple", a slight indentation is palpable at the site of the membrane. For easy access to this area the patient is placed in the supine position, and if allowable, the neck is slightly extended. The percutaneous puncture of the cricothyroid membrane may then be performed with a variety of devices.

A needle tracheostomy using a large metal needle or plastic cannula is the simplest method and may be beneficial if only partial obstruction of the anatomic airway is present. The resistance to gas flow created even by a large catheter is very substantial so that the actual volume of gas moved as tidal volume by a spontaneously breathing patient will be small. Supplemental oxygen, however, may be administered passively through such a catheter and will provide adequate arterial oxygenation even in an apneic patient but carbon dioxide elimination may be inadequate.

Additional assistance during respiration may be provided to the patient via attachments to the cannula or needle. These include adaptors to a standard bag resuscitator, ventilator, or to a high pressure gas source such as oxygen cylinder via an on-off switch to provide so-called jet ventilation.6 Exhalation with a needle or cannula technique depends upon gas escape through the partially obstructed anatomic airway or through the device used to assist inhalation. If complete airway obstruction is present, exhalation may be assisted by insertion of a second needle catheter or by external circumferential chest compression during expiration. Special adaptations to the jet technique are possible to allow use of emergency sources of compressed gas such as truck tires6 and to aid in gas removal from the lungs during exhalation.

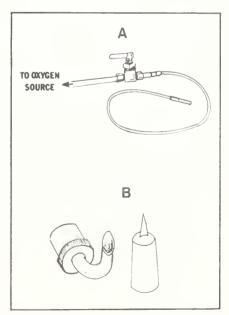


FIGURE 2: A = Transtracheal ventilation apparatus.

B = Cricothyrotome.

Translaryngeal jet ventilation can efficiently provide total ventilation with a minimum amount of extra equipment. Complications of this method may include local hemorrhage at the puncture site, esophageal perforation, subcutaneous or mediastinal emphysema, and abdominal distention. A further interesting use of transcricoid catheters has been the insertion of a long catheter through the cricoid membrane which is directed cephalad between the vocal cords into the mouth. A standard endotracheal tube may then be passed orally over the cannula which serves as a guide to direct the endotracheal tube through the larynx into the trachea.

An airway of larger diameter may be inserted percutaneously through the cricothyroid membrane by the use of cricothyrotomes of various designs. 7.8 These instruments usually include a knife-like attachment for making the

cutaneous incision or puncture and a larger curved rigid cannula for insertion into the airway. This cannula may allow adequate unassisted ventilation for the spontaneously breathing patient and is also usually of a standard size for adaptation to bag resuscitators, etc. Complications associated with cricothyrotomes are similar to those listed above for jet ventilation.

Thus, although desirable, the physician need not necessarily be skilled in intubation or the performance of an emergency tracheostomy to provide airway patency and ventilation for the distressed patient. Familiarity and facility in the use of those devices chosen by each physician is mandatory if their successful application is to be assured.

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Thrombophlebitis of the Abdominal Wall

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Abstract

Thrombophlebitis of the abdominal wall was observed in eight patients. In each case, the thrombotic process involved collateral veins which had developed in the abdominal wall in response to long antecedent severe deep venous thrombosis of the iliofemoral system. The syndrome can mimic incarcerated inguinal hernia, insect bite, and cellulitis. It appears to be an infrequent late complication of postphlebitic chronic venous insufficiency and responds well to rest, local moist heat, and anticoagulant therapy.

Encounter with this condition may alert the physician to the probable coexistence of significant chronic venous insufficiency with its attendant increased risks of thromboembolism and needs for local control of venous stasis.

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HROMBOPHLEBITIS in collateral veins in the abdominal wall was observed in eight patients. The condition presented as a puzzling, uncomfortable, cord-like swelling in the lower abdomen, beginning so suddenly in one case as to suggest the sting of a bee and with so much localized swelling near the inguinal region in another as to suggest an incarcerated hernia. All cases occurred in patients with long-standing pre-existing postphlebitic chronic venous insufficiency of the lower extremities. All responded well to anticoagulant therapy. Recurrences were observed in two cases.

Case 1

A white, married woman, age 57, was admitted to the hospital with a referral diagnosis of incarcerated inguinal hernia. Ten days previously the lower abdomen just above the left groin had been struck by the handle of a lawn mower. Six days prior to admission, a sore lump in the left inguinal region was noted. Right salpingo-oophorectomy and appendectomy for tubal pregnancy had been performed at age 37, followed by severe deep venous thrombosis in the left lower extremity. Chronic edema of the left leg existed thereafter. At age 40, left salpingo-oophorectomy for tubal pregnancy was carried out uneventfully. At age 50, the patient had been hospitalized for treatment of chronic indurated cellulitis and acute superficial thrombophlebitis in the left leg. Cystoscopy at that time disclosed multiple varicosities of the floor of the bladder in the region of the trigone.

Physical examination disclosed marked redness and heat in the pubic region in an area measuring 4 inches in horizontal and 2½ inches in vertical dimensions (Fig. 1). Linear, tender indurations were palpable under the erythematous skin in the pubic region, extending laterally from just left of midline to the inguinal crease,

then inferiorly almost vertically downward to just below the crease, in the direction of the femoral triangle. A similar swollen lesion was noted extending to the right from the midline for 1 inch. Numerous cutaneous varicose veins and small subcutaneous hard nodules, consistent with phleboliths, were seen in the medial left leg. Edema had been well controlled since age 50 by habitually wearing a heavy elastic stocking.

Coumadin anticoagulation, bed rest, and local warm moist packs to the abdomen resulted in clearing of symptoms. Physical signs of abdominal wall thrombophlebitis had disappeared three months later. Ten months later, a prominent varix, soft, compressible, and nontender, was demonstrable in the suprapubic region.

Case 2

A white married woman, age 37, was admitted to the hospital because of tenderness and redness of the abdomen. Four days before admission, tenderness in a prominent vein in the lower abdomen had been noted. Three days before admission, the lower abdominal wall became bright red and tender. Four weeks before admission, the patient had been treated for recurrent thrombophlebitis in the left leg. At that time, she was treated with phenylbutazone, penicillin, and oral trypsin-chymotrypsin. A pruritic rash which followed was treated with a short course of prednisone.

Eight years previously, she had been hospitalized for treatment of chronic indurated cellulitis of the right leg and bilateral post-phlebitic chronic venous insufficiency. At age 21, postpartum bilateral iliofemoral thrombophlebitis occurred. At age 28, recurrent postpartum right iliofemoral thrombophlebitis developed. She had become aware of varicose veins in the lower abdominal

wall three or four years prior to the current admission.

Physical examination disclosed marked obesity (height 5 '5 1/2", weight 242 lbs.). The panniculus adiposus was excessive. There was diffuse redness in the suprapubic region from the level of the symphysis to 4 cm. below the umbilicus. A tortuous, tender, indurated cord was palpable in the erythematous region. The cord could be traced by palpation from the left midclavicular line across the midline, where on the other side of the abdomen it descended distally for several centimeters and passed horizontally again to reach the right midclavicular line at the level of the inguinal ligament. Another slightly indurated, slightly tender nodule could be palpated in the right midaxillary line at mid-abdominal level.

Nontender induration of the left greater saphenous from 8 cm. below knee to midthigh was noted. There were small, localized varicose veins in the right leg and slight enlargement of the right greater saphenous vein with negative Trendelenburg and compression tests for main trunk incompetence. The condition responded to bed rest, local warm moist compresses, and anticoagulant therapy.

The patient was hospitalized on four subsequent occasions with recurrent abdominal wall thrombophlebitis, at ages 42, 46, and twice at age 48. On each such



FIGURE 1: Thrombophlebitis of pubic vein. Swelling and tenderness in inguinal region initially suggested incarcerated inguinal hernia. Scar of previous salpingooophorectomy.

occasion, there was recurrent superficial and deep thrombophlebitis of one or both lower extremities. At age 42, blunt, repeated trauma to the abdominal wall had been sustained. The patient was a surgical technician. In cleaning and autoclaving surgical instruments, she had repeatedly carried heavy trays by holding them against the lower portion of the obese abdomen. At this time, there was diffuse redness and edema in the suprapubic region, where the skin

showed dimpling of the "peau d'orange" type. Deep palpation disclosed tortuous linear, tender subcutaneous cords. Serpiginous red streaks with palpable warm, tender induration were seen extending from the suprapubic area diagonally up the left side of the abdomen, approaching the left costal margin in the flank. On the right side, similar findings extended upward approximately to umbilical level. A small ecchymosis was noted adjacent to the red area in the left



FIGURE 2A: Thrombophlebitis in a long segment of inferior component of thoraco-epigastric venin. Suprapubic region was specifically swollen and skin exhibited "peau d'orange" characteristics.



FIGURE 2B: Thrombophlebitis of a segment of right superficial epigastric vein. Note erythema and tortuosity.

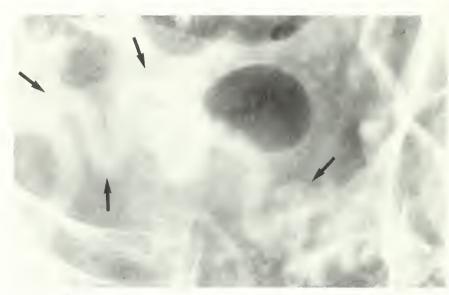


FIGURE 3A: Contrast venogram demonstrating huge, tortuous suprapubic collateral veins due to previous iliofemoral occlusion (arrows).

abdominal wall (Fig. 2A and B).

From ages 42 to 49, intractable obesity, severe neurodermatitis, moderate hypertension, and mild diabetes mellitus developed. Patient compliance faltered, and she was lost to follow-up.

Case 3

A 67-year-old white single woman was admitted because of redness and tenderness in the right lower abdominal wall. Three weeks before admission she had had acute gastroenteritis characterized by diarrhea and malaise lasting two weeks. One week prior to admission, the abdominal lesion appeared. There was a history of minor blunt trauma to the area several days before.

History revealed that the patient, at age 11, had had typhoid fever, complicated by right iliofemoral thrombophlebitis and, thereafter, lifelong chronic swelling of the right leg. Empyema with rib resection had occurred at age 28. At age 61, acute superficial thrombophlebitis in the left lower extremity followed a protracted period of traveling. At that time, examination had disclosed typical findings of chronic venous insufficiency in the right lower extremity.

At the current admission, physical examination disclosed prominent veins in the right lower quadrant which anastomosed with prominent veins in the right anterior hip region and ascended toward the umbilicus in the midportion of the right lower quadrant. Just lateral to the midline in the lower portion of the right lower quadrant, there was bright pink discoloration of the skin in an area 3 cm. in diameter where a tender, hard, tortuous cord could be palpated. The cord connected with the prominent veins.

Treatment consisting of bed rest, local warm moist packs, and Coumadin led to improvement, with clearing of the lesion during the ensuing two months.

At age 82, the patient developed acute left iliofemoral thrombophlebitis, confirmed by contrast venography (Fig. 3A). At this time the superficial veins were more prominent in the left than in the right lower quadrant and were very prominent around the left hip and left side of the abdomen extending into the flank. A large, extremely tortuous suprapubic vein could be seen in the venograms; this also was demonstrated on CT scans of the abdomen (Fig. 3B). A nodule in the right breast was detected. Mammography suggested carcinoma. After six weeks of Coumadin therapy, during which time the iliofemoral thrombophlebitis subsided, the patient was re-admitted, Coumadin therapy withdrawn, and breast biopsy accomplished. Histologic study disclosed invasive ductal cell carcinoma. A modified radical right mastectomy was performed. Coumadin therapy was resumed postoperatively and continued for the next six weeks.

Five weeks after discontinuance, recurrent thrombophlebitis in the abdominal wall appeared, characterized by an oval-shaped area of redness, tenderness, and linear induration approximately 6 cm. in transverse dimension in the mid-suprapubic region. At this time also, tender induration and erythema in a small varix in the proximal medial right thigh appeared. Coumadin was resumed, with clearing of the lesions during the ensuing six weeks. Subsequently, the patient has done well. She was placed

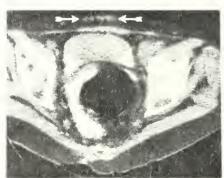




FIGURE 3B: CT scan demonstrating same enlarged collateral suprapubic veins (arrows).

on Nolvadex as oncologic therapy. Coumadin was continued for the next 14 months.

Case 4

Two years prior to admission, a white married man, age 70, had noted a tender swollen area in the suprapubic region where a cord under the skin was palpable. He was seen by a urologist but no diagnosis was established. The symptoms cleared after several weeks. He had been aware of a prominent vein running transversely across the suprapubic region since recovery from deep venous thrombosis in both lower extremities following total larvngectomy for carcinoma at age 56. He was critically ill after this operation and required multiple blood transfusions because of severe bleeding from the surgical wound; the right lower extremity was more severely affected by the thrombophlebitis than the left. He had had chronic swelling of both legs, especially the right, since that time.

Physical examination disclosed pitting edema, stasis pigmentation, and numerous cutaneous and small varicosities in the right ankle and leg. There was minimal swelling of the left leg. A prominent varicose vein coursed transversely across the suprapubic region. The vein was soft and compressible and identified by the patient as the site of the tender cord noted two years previously.

The patient was followed during the subsequent 12 years, during which time he was treated for postphlebitic chronic venous insufficiency, hypertension, gout, hyperlipidemia, transient ischemic attacks, cataracts, and carcinoma of the bladder. At no time was there recurrence of the abdominal wall symptoms nor of thrombophlebitis in the lower extremities.

Case 5

A 23-year-old white single man had noted 10 days prior to admission sudden sharp pain at the right costal margin. He found a red, tender area at the site and thought he had been stung by a bee. Eight days before admission he noted a similar area in the lower right abdominal



FIGURE 4A: Thrombophlebitis in right lateral abdominal wall; early extension into proximal right thigh. Note erythema and tortuosity.

wall. These then extended proximally and distally, respectively, to become confluent as a hard, red, tender streak from the rib margin to the hip. Three days before admission, similar streaks extending toward the midline in the suprapubic region and also down into the proximal anterior right thigh appeared. The patient stated he thought he might have been struck in the right costal margin region a week prior to onset of symptoms.

Review of past history disclosed that the patient had been seen at age 19 with the diagnosis of severe chronic venous insufficiency of the right lower extremity and severe stasis dermatitis, cellulitis, and ulceration of the right leg. There was a history of sudden onset of right iliofemoral thrombophlebitis 14 months previously. There was no definite history of acute trauma or other serious illness then, but he had engaged in strenuous activities as a part of a physical development program and had repeatedly lifted bar bells weighing 300 lbs.

Several months after the thrombophlebitis, large varices appeared in the right lower extremity. He had had intermittent albuminuria since age 3. An intravenous pyelogram indicated inactive pyelonephritis of the upper left kidney. At age 19, there were striking large, tortuous varicosities coursing across the right side of the abdomen, in the suprapubic region, extending up into the right flank to the right costal margin and downward to the right groin. There was marked swelling, moderate stasis pigmentation and surrounding erythema of the right leg, and a 4 x 6 cm. ulceration on the medial surface of the midright leg (Fig. 4B). The leg ulcer healed with medical treatment.

At the current admission, there was marked tenderness, induration and redness in a tortuous linear pattern extending from the right inguinal region to the right costal margin in the right anterior axillary line (Fig. 4A). There were several small similar lesions extending from the inguinal region across the suprapubic region toward the midline. Also noted were two tender streaks extending distally across the inguinal ligament into the proximal portion of the right anterolateral thigh. Initially, the affected skin presented a fiery red quality, later a dusky red. The leg ulceration had remained healed, but diffuse swelling and stasis pigmentation of moderate degree of the right ankle and foot still were present. Numerous large varicosities of the right foot, leg, and thigh, involving the entire circumference of the extremity, were noted. The right greater saphenous was enlarged but valvular incompetence could not be demonstrated. The condition responded to bed rest, local warm moist applications, and Coumadin therapy.



FIGURE 4B: Same patient, showing evidence of severe chronic venous insufficiency in the right lower extremity and the marked development of superficial abdominal collateral veins. Photograph taken five years before abdominal wall thrombophlebitis shown in Figure 4A.

Bilateral lower limb venography disclosed extensive occlusive changes with recanalization in the entire deep venous system of the right lower limb up to and including the right common iliac vein. There were numerous large superficial varicosities of the right leg and thigh. Collateral, enlarged veins were seen in the pelvis; especially large, coiled collaterals were demonstrated in the right lateral abdominal wall (Fig. 4C). A delayed KUB exposure showed focal scarring of the upper pole of the left kidney, consistent with ancient pyelonephritis.

Anticoagulants were continued for the next three months. Tenderness had cleared two weeks after hospital dismissal; redness continued for two months. Induration was still noted eight months later but had greatly decreased. The patient has been followed subsequently for three years and there has been no recurrence.

Case 6

A white widow, age 77, while hospitalized for treatment of recurrent stasis dermatitis and ulceration of the left leg and recurrent segmental right greater saphenous thrombophlebitis, underwent excision of urethral caruncle. Minidose therapy heparin was given postoperatively to prevent extension of the superficial thrombophlebitis and recurrence of deep venous thrombosis, but, in spite of this, thrombophlebitis of the abdominal wall developed. This was characterized by redness, induration, and tenderness of a large suprapubic varicosity, with associated swelling of the lower abdominal wall (Fig. 5).

The patient had longstanding preexisting severe postphlebitic chronic venous insufficiency of the left lower extremity and had had stasis cellulitis and ulceration of the left leg on numerous occasions in the past, dating to postpartum left iliofemoral thrombophlebitis at age 33. The patient had first been examined at age 65, at which time stasis ulceration of the left leg and acute thrombophlebitis in a varix in the right thigh were treated. The prominent



FIGURE 4C: Contrast venography, showing striking, large tortuous collateral veins in right abdominal wall and old occlusion of right iliofemoral system (arrow indicates the former).

transverse varicosity in the suprapubic region was first noted then and was at that time soft and nontender. There had been no recurrence of deep vein thrombosis, but recurrent segmental superficial thrombophlebitis of the left thigh developed at ages 66, 68, and 79.

Treatment of the abdominal wall thrombophlebitis consisted of bed rest, local warm moist applications, and therapeutic doses of heparin followed by full doses of Coumadin. Tenderness subsided over several weeks. Induration cleared in eight weeks. There has been no recurrence to date (to age 80).

Case 7

Thrombophlebitis of the abdominal wall appeared without apparent trauma in a 35-year-old white married woman. Signs and symptoms cleared promptly with Coumadin therapy, which was continued a year. There was no recurrence during follow-up to age 38.

At age 27 while on oral contraceptive medication for dysmenorrhea, thrombophlebitis of the left lower extremity with multiple pulmonary emboli occurred. Ligation of the inferior vena cava and ovarian vein were performed. At age

30, total hysterectomy for endometrial carcinoma was performed. After preliminary cobalt irradiation and radium implantation, severe postoperative right iliofemoral thrombophlebitis developed. This was followed by severe edema, difficult to control. The patient was markedly obese (height 5 '6½", weight 300 lbs). The abdominal veins and the lower extremity venous pattern at that time had not been unusually prominent.

Case 8

A white married man, age 42, on awakening, noted a tender lump in the course of a varicosity in the right lower abdomen. A diagnosis of thrombophlebitis of the abdominal wall was made. This improved with Coumadin therapy. There has been no recurrence. Huge, tortuous varicosities remain in the right lateral abdomen and right flank, and a small varix in the suprapubic region, confirmed by examination at age 49, but these veins were soft, nontender and showed no signs of inflammation.

At age 33, left nephrectomy for hypernephroma was performed. Radiation treatment was given. The tumor recurred locally six months later, attended by severe swelling of the lower limbs. Venography was performed. A diagnosis of tumor invasion of the inferior vena cava was made. Additional x-ray treatment was administered, with improvement. Subsequently, there had been persistent swelling of the lower extremities, especially the right, and enlargement of the superficial veins in both lower limbs and the abdominal wall.

Subsequently, at age 43 and while still on long-term Coumadin therapy, retroperitoneal hemorrhage and septicemia developed. The patient became critically ill. When Coumadin was withdrawn, pulmonary infarction occurred. After a stormy illness, the patient recovered, and long-term Coumadin therapy was re-instituted. He has been followed to age 52. There has been no recurrence of phlebitis in the abdominal wall or elsewhere, nor of hypernephroma.



FIGURE 5: Thrombophlebitis of suprapubic varicosity. Note typical crythema and tortuosity.

Discussion

Thrombophlebitis is a common condition and occurs in veins in all regions of the body. It involves the veins of the lower extremities or pelvis most frequently. Thrombophlebitis involving a superficial varicose vein in the leg or thigh is familiar to all physicians. Thrombophlebitis in the deep veins of the calf and in the iliofemoral veins ("milk leg" or phlegmasia alba dolens) are readily recognized by most physicians. The severe form of the latter, phlegmasia cerulea dolens or "blue phlebitis," often causes gangrene. This syndrome is rare and not generally well recognized.1

In the upper extremities, thrombophlebitis of an antecubital vein, usually stemming from endothelial trauma due to frequent venipunctures or to an indwelling catheter, is of common occurrence and usually not serious. Occasionally, it may extend into the deep veins of the forearm and arm and produce serious consequences.

Thrombophlebitis involving the axillary and subclavian veins (Paget-Schroetter syndrome) is less well recognized by physicians. It is being seen more often recently, due to the increasing use of the subclavian vein for

parenteral nutrition, insertion of pacemakers, and central venous monitoring.²

Thrombophlebitis of visceral veins may produce characteristic syndromes (hepatic vein thrombosis (Budd-Chiari syndrome), portal vein thrombosis (Banti's syndrome), and mesenteric venous thrombosis). Thrombosis of the cerebral venous sinuses produces characteristic neurological syndromes of grave significance. Thrombosis of the inferior vena cava and of the superior vena cava are well recognized syndromes of serious import, both from the associated systemic conditions and from the secondary venous obstructive effects.

Superficial thrombophlebitis of the chest wall (Mondor's disease) is a rather uncommon condition generally believed to be caused by stretch trauma to the venous endothelium.³ It is a benign condition but of interest chiefly because of the problem of its diagnosis and possible confusion with breast malignancy.

Thrombophlebitis of the abdominal wall appears to be a relatively benign process. It is of interest primarily because of possible problems in diagnosis and because of its implications. It appears to be a rare occurrence. Over a period of



FIGURE 6A: Patent suprapubic collateral veins in a middle-aged man who had had left iliofemoral thrombophlebitis complicating typhoid fever in his youth. These varicosities are typical of those in which thrombophlebitis later developed in the eight patients described in this report.

several decades, the author has observed hundreds of cases of severe postphlebitic chronic venous insufficiency with stasis complications in the leg. In many of these, patent, asymptomatic collateral veins in the lower abdominal region have been noted (*Fig. 6A and B*), yet only the eight cases with complicating thrombosis in the abdominal collateral have been seen.

While the diagnosis was rather obvious in most of the cases, in one case the admitting diagnosis had been incarcerated inguinal hernia. In another case, an insect bite had been suspected. In others, cellulitis was a differential consideration. If the diagnosis of thrombophlebitis is considered, it should be readily established by the restriction of the erythema, the swelling, induration, and tenderness to the course of superficial veins.

In one case (Case 2), there was edema

of the suprapubic region and dimpling of the skin similar to the "peau d'orange" type seen in carcinoma of the breast with involvement of the subdermal lymphatics; however, in this patient, these dermal changes completely resolved with therapy, and the patient was followed for the ensuing 12 years with no sign of cancer. This was the only case with multiple recurrences.

Perhaps equally as important as the establishment of a correct diagnosis in abdominal wall phlebitis is a consideration of its implications. Each case in this series had obvious evidence of preexisting severe chronic venous insufficiency of one or both lower extremities. Stasis ulceration occurred in two cases, chronic indurated cellulitis in another two, and severe edema and cyanosis requiring heavy elastic support in all eight.

A definite history of antecedent deep venous thrombosis, usually of the iliofemoral type, one heralded by pulmonary embolism, was obtained in every case. The coexistence of serious deep venous disease places these patients at greater risk of recurrent venous thromboembolism than the general population. Although recurrent acute deep thrombophlebitis was diagnosed at the same time as the acute abdominal wall thrombophlebitis in only two cases, the possibility needs consideration in all such cases.

Anticoagulant therapy seems to have been helpful in all cases in clearing the abdominal lesions; it would be justifiable as a preventive measure against recurrent deep venous thrombosis in every case, particularly if immobilization were a factor in the initial treatment.



FIGURE 6B: Left lower extremity of same patient, showing extensive stasis pigmentation, dermatitis and ulceration.

					SOOMINAL W			
		<u>C L 1</u>	NICAL OA	TAIN 8	CASES			
CASE NO.	1	2	3	4	5	6	7	8
AGE AT ONSET	57	37	67	70	23	77	35	42
SEX	F	F	F	м	М	F	F	М
LOCATION	SUPRAPUBIC R >L	SUPRAPUBIC AND BILATERAL LATERAL ABOOM.	SUPRAPUBIC R > L	SUPRAPUBIC	RIGHT ABOOM. & SUPRAPUBIC: RIGHT ANT. AX. LINE TO COSTAL MARGIN & PROX. THIGH	BILATERAL SUPRAPUBIC	LOWER ABOOMINAL	RIGHT LOWER ABOOMEN
PRECIPITATING FACTORS	TRAUMA	TRAUMA. ? STEROIDS	7 TRAUMA OEHYORATION	NONE	PRAUMA	POST-OP STATE	NONE	NONE
ANTICOAGULANT THERAPY GIVEN?	YES	YES	YES	YES	YES	YES	YES	YES
DURATION OF LOCAL SYMPTOMS	10 WEEKS	3 - 9 WEEKS	3 WEEKS	SEVERAL WEEKS	3 WEEKS	4 WEEKS	PROMPT RESOLUTION	? 4 - 6 WEEKS
OURATION OF LOCAL ABNORMAL PHYSICAL FINOINGS OF ACTIVE PHLEBITIS	10 WEEKS	5 WEEKS - 3 MONTHS	4 MONTHS	?	8 MONTHS	8 WEEKS	PROMPT RESOLUTION	' 4 - 6 WEEKS
NO. OF YEARS FOLLOWEO AFTER FIRST EPISOOE	1 YEAR	12 YEARS	16 YEARS	12 YEARS	4 YEARS	3 YEARS	3 YEARS	10 YEARS
RECURRENCE ?	NO	YES; 4 TIMES (AT AGES 42, 46, and 48)	YES; ONCE (AGE 82)	NO	NO	NO	NO	NO
BNORMAL COLLAT- RAL VEINS CONFIRM- O BY VENOGRAPHY?	NO	NO	YES, ALSO BY CT SCAN	NO	YES	NO	NO	NO
IOE MATCHEO WITH IDE OF LOWER LIMB HLEBITIS?	YES	<u>*</u>	YES	?	YES	<u>*</u>	?	YES
ISCELLANEOUS	SWELLING OF RIGHT GROIN	SUPRAPUBIC SWELLING; PEAU D' ORANGE	SUPRAPUBIC SWELLING			SUPRAPUBIC SWELLING		

TABLE 1

In every case of thrombophlebitis, an associated malignant process, latent or patent, should be considered in the initial work-up as a possible etiologic factor. This is true regardless of the region of the body where thrombophlebitis occurs. In the cases reported here, such an association could not be established.

In three cases (Cases 4, 7, and 8) a malignant lesion had been associated with the initial episode of deep venous thrombosis (laryngeal, endometrial, and renal, respectively), but the later occurrence of abdominal wall phlebitis seemed unrelated to the neoplasm, except by way of the vascular obstructive effects secondary to the antecedent venous thrombosis. In another case (Case 3), a recurrence of abdominal wall thrombophlebitis was timed with the diagnosis of cancer of the breast; however, the initial episode of abdominal wall thrombophlebitis occurred 15 years before carcinoma was diagnosed, and operative

findings at mastectomy and follow-up to date (19 months) have not indicated metastatic disease.

Other implications are the need for a comprehensive evaluation for other possible etiological factors in any instance of unexplained thrombophlebitis and attention to the existing associated chronic venous insufficiency, which in itself is often a significant cause of disability and may have been neglected by the patient. Significant systemic disease unrelated directly to the abdominal wall phlebitis was found in five cases.

In the eight cases reported here, the thrombophlebitic process appeared clearly to have been a sequel to the pathologic enlargement of superficial collateral veins in the abdominal wall, which had developed over a period of years secondary to antecedent thrombotic obstruction of the deep venous circulation of the lower limb. There appeared

to be no significant age or sex distribution. (Tables 1 and 2) Tobacco use could not be impugned. Blunt trauma to the abdominal wall, dehydration, obesity, and steroid usage were possible contributory factors in the pathogenesis.

The interval following the initial episode of deep venous thrombosis was long, ranging from five years to 55 years, in five cases exceeding 14 years. This long period of time presumably allows an extensive development of collateral circulation during which small veins are converted to large veins, valves are rendered incompetent, direction of flow reversed or rendered facultatively bidirectional, and direct anastomotic channels gradually changed to meandering, coiled conduits, conducive to stasis and thrombosis from minimal local trauma or systemic factors promoting hypercoagulability. The extreme tortuousity of the abdominal wall varicosities is shown in Figs. 3A and 4C.

		<u>T H</u>	IROMBOPH	LEBITIS OF	ABOOMIN	AL WAL	<u>L</u>	
			ASS	OCIATEO C	0 N 0 I T I 0 N	S		
CASE NO	1	2	3	ią.	5	6	7	8
AGE AT ONSET	57	37	67	70	23	77	35	42
SEX	F	F	F	м	м	F	F	м
PREVIOUS THROMBOPHLEBITIS								
A) LOCATION	LEFT ILIO FEMORAL	BILATERAL ILIO- FEMORAL, R - L	RIGHT ILIO FEMORAL	BILATERAL ILIO- FEMORAL, R'L	RIGHT ILIO FEMORAL	LEFT ILIO- FEMORAL & RIGHT SUPERFICIAL	1) PULMONARY EMBOLISM 2) RIGHT ILIOFEMORAL THROMBOPHLEBITIS	BILATERAL ILIO- FEMORAL, R> L
B) PRECIPITAT ING FACTORS	FOLLOWEO RIGHT SALPINGO-OOPHO RECTOMY AND APPENDECTOMY, AGE 37, FOR TUB AL PREGNANCY	POSTPARTUM PERIOO, AGE 21	TYPHOIO FEVER, AGE 11	LARYNGECTOMY FOR CA LARYNX, AGE 56	EFFORT THROMBOSIS, FROM WEIGHT- LIFTING, AGE 18	STATE,	1) ORAL CONTRACEPTIVE USEO FOR OYSMEN ORRHEA, AGE 27 2) FOLLOWEO HYSTER ECTOMY FOR ENOO- METRIAL CA, AGE 30	THROMBOSIS OUE TO TUMOR INVASION OF INFERIOR VENA CAVA AGE 33
C) YEARS PRE CEDING AB- DOMINAL WALL PHLEBITIS	20	16	55	14	5	44	8	9
OURATION OF SIG- NIFICANT POST- PHLEBITIS CHRON IC VENOUS INSUF FICIENCY PRECED ING ABOOMINAL WALL PHLEBITIS	20	16	55	14	5	44	5	9
OTHER CONDITIONS								
A) PRE EXISTING	LEFT SALPINGO- OOPHRECTOMY FOR TUBAL PREG- NANCY, AGE 40	OBESITY HYPER- TENSION		HYPERTENSION	UNILATERAL PYELONE- PHRITIS, LEFT	HYPER- TENSION	OBESITY	LEFT NEPHRECTOMY FOR HYPERNEPHROMA 6 MONTHS BEFORE AGE 33
B) SUBSEQUENT		OIABETES MELLITUS HYPER- TRIGLYCERIOEMIA, NEUROOERMATITIS		BLACOER, ASHO, ASO		OIABETES MELLITUS, KYPHOSCOL IOSIS, CAT ARACTS		RETROPERITONEAL HEMORRHAGE & SEPT CEMIA, PULMONARY EMBOLI, AGE 43
TOBACCO USEO	но	NO	но	YES, UNTIL AGE 56	NO	но	NO	YES

TABLE 2

Filler and Edwards6 enumerated the factors of importance in the functional development of collateral circulation. These are: (1) persistent direct or indirect connection of the potential collateral vessels proximal and distal to the occluded segment of parent vessel, (2) the enlargement of luminal diameter of the collateral to allow incompetence of valves and hence bidirectional flow, and (3) a single large channel is more effective than multiple small channels in assuming the major venous return, since, according to Poiseville's law, flow is proportional to the fourth power of the luminal diameter.

This might explain the predominance in size of only one or two of the numerous abdominal wall collateral veins observed. The factor of time apparently is important for full development of this process. In the cases reported here, collateral circulation through superficial routes was apparent. Possible routes through superficial channels are in-

dicated diagrammatically in Fig. 7.

The principal routes in the author's cases appeared to be through branches of the saphenofemoral junction region (superficial epigastric, superficial circumflex iliac, and external pudendal) and through enlarged pubic veins, fed either from contralateral connections with the external iliac vein or ipsilateral connections through the pelvic and presacral plexuses and the obturator branch of the internal iliac vein.

Femorocaval venograms were not available to delineate more exactly these routes. Deep collateral routes stimulated by iliofemoral thrombophlebitis are not a direct part of the abdominal wall phlebitis syndrome and are not shown here. These routes, however, have been well described elsewhere. Overdevelopment of deep collateral veins can cause extrinsic pressure on adjacent structures, such as the ureter. 8

In contrast to enlarging deep collateral veins, enlarging superficial collateral

veins have very little restraining effect from the adjacent loose structures of skin and subcutaneous tissues. This superficial, unsupported location possibly renders such varices more vulnerable to trauma and initiation of thrombosis.

Summary

Thrombophlebitis of the abdominal wall appears to be a late, rare complication of postphlebitic chronic venous insufficiency of the lower extremities. In the eight cases here reported, it was observed in collateral veins in the lower abdominal wall years after the antecedent episode of deep venous thrombosis involving the iliofemoral system. Postphlebitic changes in the leg were well developed long before the abdominal wall phlebitis occurred.

An encounter with this syndrome may alert the physician to the co-existence of serious obstructive venous disease in the lower extremities and to its attendant thromboembolic risks and needs for control of local stasis.

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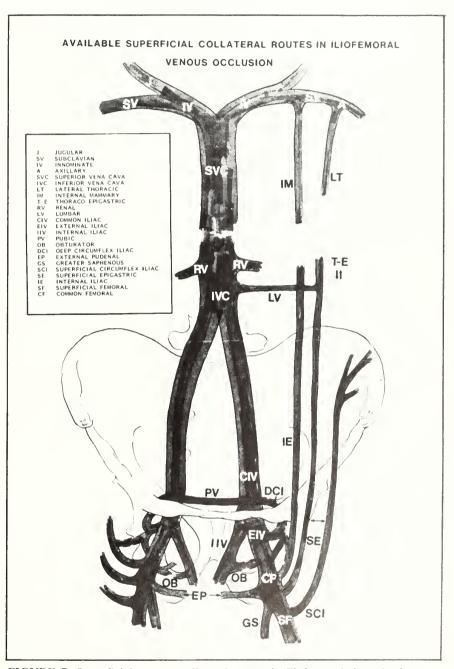


FIGURE 7: Superficial venous collateral routes in iliofemoral thrombosis.

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PROCARDIA 11: CAPSULES For Grain PROCARDIA 11: CAPSULES For Grain INDICATIONS AND USAGE I Vasospastic Angina (PRILLARR) A interdiption is individual for the disciplence of the control of

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to kers.

In very proper sion and or increased fluid volume requirements have been reported in patients in vining PROCARDIA together with a beta blorking agent who underwent coronary artery bypass writers using high dose tentany; anesthesia. The interaction with high dose tentany appears to be due to the combination of PROCARDIA alone with low doses of tentany; in other surgical procedures or with other narcotic analgesis cannot be ruled out in PROCARDIA treated patients where surgery using high dose tentany; anothers as continuous extensive surgery using high dose tentany anothers have as a surgery using high dose tentany anothers thesia is continuous to the patient's condition permits. Sufficient time rat least 36 hours should be allowed for PROCARDIA to be washed out of the body prior to surgery.

Increased Angina Dic lasional patients have developed well documented increased frequency, duration in the surgery of the condition of the surgery. The processing the process of the surgery is a surgery of the surgery of the surgery of the process of the proc

arison aled with decreased district pressure with increased final rate of non-increased decreased heart rate alone.
Beta Blocker Withdrawai. Patients recently withdrawn from beta blockers may develop a withdrawai undrame with increased angina probably related to increased sensitivity to catecholumines. Initiation of PROCAROIA freatment will not prevent this occurrence and might be expected to exacerbate 1 by privinking reflex latecholamine release. There have been occasional reports of increased angina. Laterthing of beta blocker withdrawai and PROCAROIA initiation. It is important for taper beta bilities.

Congestive Heart Failure: Rarely, patients, usually receiving a beta blocker have developed heart failure after beginning PROCARDIA. Patients with tight aortic stenosis may be at greater risk for

PRECAUTIONS General Hypotension Because PROCARDIA decreases peripheral vascular

PRECAUTIONS General Hypotension Because PROCARDIA decreases peripheral vascular resistance. Fairely munituring of brind pressure during the initial administration and titration in PROCARDIA is suggested. Close observation is especially recommended for patients already taking medications that are known to lower blood pressure. See Warnings.)

Peripheral edema. Mild to inoderate peripheral edema. Hypically associated with arterial vasoriation and of ture to either ventricular dystunction in cruss in about one in ten patients treated with PROCARDIA. This edema occurs primarily in the lower extremities and usually responds to durefic therapy. With patients whose angina is complicated by congestive heart failure, care should be taken to differentiate this peripheral edema from the effects of increasing left ventricular dysfunction.

Drug interactions. Beta addrenergic blocking agents. Issee Indications and Warnings Experience liver 1300 patients in a non comparative clinical trial has shown that concomitant administration of PROCARDIA and beta brocking agents. Is usually well iterative reports suggesting that the combination may increase the ikelihood of congestive heart tallure. Levere hypotension or exacerbation of anging.

Long acting nitrates. PROCARDIA may be safely on administered with nitrates but there have been no controlled studies to evaluate the antiang has effectiveness of this combination. Digitalis. Administration of PROCARDIA with digitax in increased digitax in the average increase was 45°. Another investigator found no increase in digitax even of thirteen patients with coronary artery disease. In an uncontrolled study of over two soundered patients with coronary artery disease. In an uncontrolled study of over two digital patients with coronary artery disease. In an uncontrolled study of over flow conditions and patients with coronary artery disease. In an uncontrolled study of over two diseases are applients with coronary artery disease. In an uncontrolled study of over flow of possible over or un

Carcinogenesis inutagenesis impairment of terthity. When given to rats prior to mating interprise award reduced territing at a dose apprise matery 30 times the maximum recommended human dose. The provided representation of the provided recommended human dose. The provided recommended recommend

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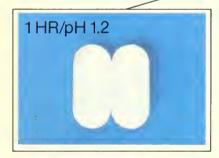


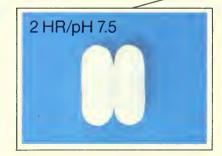
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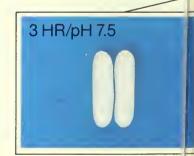


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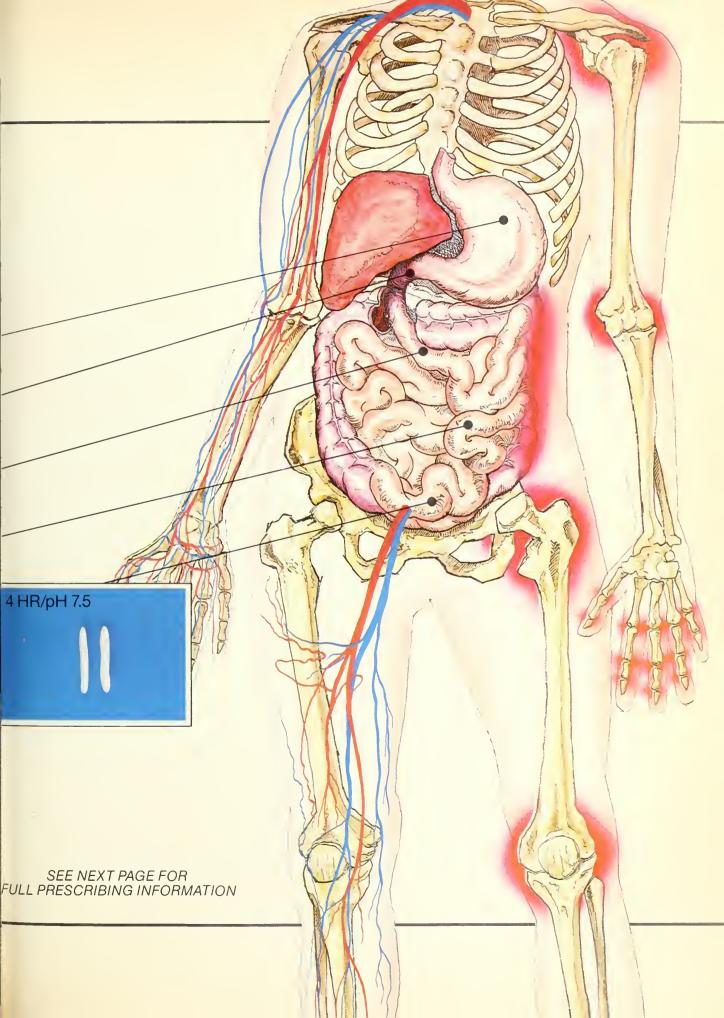


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that plasma levels of salicylic acid and acetylsalicylic acid can be measured 24 hours after a single oral dose. This substantiates a twice daily dose regimen. Multiple dose bioavailability studies showed similar steady-state salicylate levels for Zorprin as for conventional release aspirrin using the same total daily dose. Long-term monitoring of salicylate levels showed no signs of accumulation once steady-state levels were reached (4-6 days). Studies of *in vivo* prostaglandin levels (PGE2) have shown Zorprin plasma levels of salicylic acid and acetylsalicylic acid to reduce PGE2 levels 14 hours after a single oral 800 mg dose while an equivalent dose of aspirin produced a reduction of PGE2 levels only through six hours. Zorprin's effect on prostaglandins other than PGE2 has not been determined. Salicylates are excreted mainly by the kidney, and from studies in humans it appears that salicylate is excreted in the urine as free salicylic acid (10%), salicyluric acid (75%) salicylic phenolic (10%), acyl glucuronides (5%) and gentisic acid (<1%). INDICATIONS & USAGE: Zorprin is indicated for the treatment of rheumatoid arthritis and osteoarthritis. The safety and efficacy of Zorprin have (incapacitated, largely or wholly bedridden, or confined to wheelchair, little or no self-care). In patients treated with Zorprin for rheumatoid arthritis and osteoarthritis, the anti-inflammatory action of Zorprin has been shown by reduction in pain, morning stiffness and disease activity as assessed by both the investigators and patients. In clinical studies in patients with rheumatoid arthritis and osteoarthritis. Zorprin has been shown to be comparable to conventional release aspirin in controlling the aforementioned signs and symptoms of disease activity and to be associated with a statistically significant

the investigators and patients \(\to \) in clinical studies in patients with rheumatoid arthritis and osteoarthritis. Zorprin has been shown to be comparable to conventional release aspirin, in controlling the aforementioned signs and symptoms of disease activity and to be associated with a statistically significant reduction in the milder gastrointestinal side effects (see ADVERSE REACTIONS). Zorprin may be well tolerated in some patients who have had gastrointestinal side effects with conventional release aspirin, but these patients when treated with Zorprin should be carefully followed for signs and symptoms of gastrointestinal bleeding and ulceration. \(\to \text{Since There have been no controlled trials to demonstrate whether or not there is any beneficial effect or harmful interaction with the use of Zorprin in conjunction with other nonsteroidal anti-inflammatory agents (NSAI), the combination cannot be effect or harmful interaction with the use of Zorprin in conjunction with other nonsteroidal anti-inflammatory agents (NSAI), the combination cannot be recommended (see Drug Interactions). Because of its relatively long onset of action, Zorprin is not recommended for antipyresis or for short-term analgesia. 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While salicylates in large doses have a uncosuric effect, smaller amounts may reduce water excretion and increase serum uric acid. USE IN PREGNANCY. Aspirin can harm the fetus when administered to pregnant. amounts may reduce water excretion and increase serum uric acid _ USE IN PREGNANCY Aspirin can harm the letus when administered to pregnant women. Aspirin interferes with maternal and infant hemostasis and may lengthen the duration of pregnancy and parturition. Aspirin has produced teratogenic effects and increases the incidence of stillbirths and neonatal deaths in animals. _ If this drug is used during pregnancy, or if the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to the fetus _ Aspirin should not be taken during the last 3 months of pregnancy _ PRECAUTIONS: Appropriate precautions should be taken in prescribing Zorprin for patients who are known to be sensitive to aspirin or salicylates. Particular care should be used when prescribing this medication for patients with erosive gastritis, peptic uder, mild diabetes or gout. As with all salicylate drugs, caution should be exercised in prescribing Zorprin for those patients with bleeding tendencies or those on anticoagulants _ In order to avoid exacerbation of disease or adrenal insufficiency, patients who have been on prolonged corticosteroid therapy should have their therapy tapered slowly rather than discontinued abruptly when Zorprin is made a part of the treatment program _ Patients receiving large doses of aspirin and/or prolonged therapy may develop mild salicylate intoxication (salicylism) that may be reversed by dosage reduction _ Dsalicylates should be used with caution in patients with severe hepatic damage, prexisting hypoprothrombinemia, Vitamin K deficiency and in those undergoing surgery _ Since aspirin release from Zorprin is pH dependent, it may change in those conditions where the gastric pH has been increased as a result of antacids, gastric secretion inhibitors or surgical procedures _ Drug Interactions; (See WaRNINGS). Aspirin may interfere with some anticoagulant and antidabetic drugs. Drugs which lower serum uric acid by increasing uric acid excretion (uricosurics) may be antago alcohol and asprrin may increase the risk of gastrointestinal bleeding ☐ Aspirin may enhance the activity of methotrexate and increase its foxicity of solid produced by spirinolactione may be decreased in the presence of salicylates. Concomitant administration of other anti-inflammatory drugs may increase the risk of gastrointestinal ulceration. Urrinary alkalinizers decrease aspirin's effectiveness by increasing the rate of salicylate renal excretion. Phenobarbital decreases aspirin's effectiveness by enzyme induction. ☐ Pregnancy Category D. See WARNINGS Section. ☐ Nursing Mothers: Salicylates have been detected in the breast milk of nursing mothers. Because of the potential for serious adverse reactions from aspirin in nursing infants, a decision should be made whether to discontinue nursing or discontinue the drug, taking into account the benefit of the drug to the mother coagulant drugs or with severe anemia should avoid Zorprin. Aspirin used chronically may cause a persistent iron deficiency anemia. ☐ Gastrointestial: Aspirin may potentiate peptic ulcer, and cause stomach distress or heartburn. Aspirin can cause an increase in occult bleeding and in some patients massive gastrointestinal bleeding. However, the greatest release of active drug from Zorprin is designed to occur in the small intestine over a period of time. This has resulted in fewer symptomatic gastrointestinal side effects. ☐ Allergic: Allergic: Allergic and anaphylactic reactions have been noted when hypersensitive individuals have taken aspirin. Fatal anaphylactic shock, while not conimon, has been reported. ☐ Respiratory: Aspirin intolerance, manifested by exacerbations of bronchospasm and rhinitis, may occur in patients with a history of nasal polyps, asthma, or rhinitis. The mechanism of this intolerance is unknown but may be the result of aspirin-induced shunting of prostaglandin synthesis to the lipoxygenase pathway and the liberation of leukotrienes, e.g. slow-reacting substance of anaphylaxis. ☐ Dermatologic: Hives, rashes, and an occur in infants, salicylate half-lives of 30 hours have been reported in infants 4-8 months old Treatment for mild intoxication should include emptying the stomach with an emitic, or gastric lavage with 5% sodium bicarbonate. Individuals suffering from severe intoxication should, in addition, have forced diuresis by intravenous infusions of sodium bicarbonate and dextrose or sodium lactate. In extreme cases, hemodialysis or peritorial dialysis may be required. ("A plasma salicylate level of 160 mg/dl in an adult is usually considered lethal.).) DOSAGE & ADMINISTRATION: In order to achieve a zero-order release, the tablets of Zorprin bould be swallowed intend. Breaking the tablets or disrupting the structure will after the release profile of the drug. It is recommended that Zorprin be taken with sufficient quantities of fluids (8 oz. or more). Adult Dosage: For mild to moderate pain associated with rheumatiod arthritis and osteoarthritis, the recommended initial dose of Zorprin is 1600 mg (2-800 mg tablets) twice a day. Because of Zorprin sprolonged release of aspirin into the bloodstream, Zorprin tablets may be taken as a b. if dose Further adjustment of the dosage should be determined by the physician, based upon the patient's response and needs. Since it will take 4-6 days to reach steady-state levels of salicylic acid with Zorprin, it is recommended dosages be given for at least one week before further adjustment in general, patients with rheumatoid arthritis seem to require higher doses of Zorprin shall be proported for children below the age of 12. HOW SUPPLIED: Zorprin is not recommended for children below the age of 12. HOW SUPPLIED: Zorprin is not recommended for children below the age of 12. HOW SUPPLIED: Zorprin is not recommended for children below the age. doses of Zorprin than do patients with osteoarthritis \square Zorprin is not recommended for children below the age of 12. \square HOW SUPPLIED: Zorprin Tablets 800 mg; plain, white capsule-shaped tablets \square Bottles of 100 Tablets \square NDC 0524-0057-01 \square Caution: Federal law prohibits dispensing without prescription \square U.S. Patent No. 4,308,251 \square Manufactured and Distributed by: BOOTS PHARMACEUTICALS, INC., Shreveport, Louisiana 71106 U.S.A.

EDITORIALS

Huntington's Disease Discovery

The marker for inheritance of Huntington's Disease has been discovered as a result of a three-year genetic research project in which the Medical Genetics Department of I.U. School of Medicine participated with several other research institutions.

Huntington's Disease (Huntington's Chorea), an inherited disease characterized by brain degeneration, has long been a puzzle to physicians and a tragedy for families in which the condition occurs. Each child born in a Huntington Disease family has a 50-50 chance of carrying the gene and thus will also be affected and can also transmit the heritable defect. The other half of any generation will be genetically normal.

Clinical symptoms and signs of the disease usually do not appear until late in the fourth decade of life. Because of this, persons with the defect may and usually do marry and produce children, without knowing whether or not they have inherited the disease.

Various types of medical research have been pursued for many years in an effort to discover a method of making the diagnosis of Huntington's defect while the child is young and may then decide to avoid fathering or bearing children. Up until now it was impossible to distinguish between individuals who had the gene and, therefore, have a 50% chance that each of their children will be affected and those who did not inherit the gene and thus would have no risk of affected children.

From now on it will be different. The defective gene has been located on human chromosome number four. DNA studies may now be conducted on cell cultures of young family members or the defective gene may be ruled in or out by amniocentesis in the case of pregnancy in a Huntington Disease family.

The genetic research was a joint project which involved the Department of Medical Genetics of I.U. School of Medicine, Massachusetts General Hospital and the Hereditary Disease Foundation, with support from the foundation and the National Institutes of Health.

Discovery of a marker close to the

Huntington's genc is the first step toward early diagnosis, more accurate genetic counseling, prevention and hopefully treatment. There are some 2,500 persons in Indiana who may carry the defect. It will now be possible to test and determine positively those members of the group who have the defective gene and to reassure the others that they are genetically normal.

The physicians of Indiana salute and congratulate Dr. P. Michael Conneally, professor of Medical Genetics and Neurology, and Dr. Joe Christian, chairman of the Department of Medical Genetics.

The Case for High Tech

Dr. Walter L. Robb of the General Electric Company says those who blame new high technology such as Cat Scanners for the increased cost of medical care are now being proved wrong as it becomes evident such systems "generate net savings to the health care consumer."

Computed Tomography scanning procedures have proven to be more cost-effective than the x-ray procedures they have replaced. They provide images of "incredible anatomic detail" in a few seconds and do not necessarily require a hospital admission.

Diagnostic imaging equipment presently accounts for only ½ of 1 per cent of the nation's anticipated 1983 health care cost of \$362 billion.

Another example of new technology that is saving money is "digital x-ray." The ability to enhance the image of the involved tissue and to subtract unwanted body structures gives an early diagnosis that is more accurate than a diagnosis by conventional methods, which require more time and manipulation.

Nuclear Magnetic Resonance is still in the developing stage. It may join its two modern predecessors when its full capabilities are known.

The new technological systems are now making diagnoses much more quickly and more accurately with little or no invasive element to disturb the patient. The gain in time shortens the hospital stay and lowers its cost. It also effectuates an accurate diagnosis and avoids several days of "old-fashioned" investigation, which tends to debilitate

the patient. Many conditions worsen with passage of time and if diagnosed immediately can be treated effectively with a return to normal function in a much shorter time.

The new technology buys something that cannot be acquired in any other way—the supreme advantage of a highly accurate diagnosis arrived at early in the game.

The Language Barrier

The most important element in the doctor-nurse-patient relationship is the ability to communicate. The sicker the patient, the more crucial communication becomes.

Aside from the unconscious patient, the worst complication in a desperate situation is a language barrier.

America is made up of immigrants and their offspring, many of whom emigrated from non-English speaking countries. A surprising number of people, especially near seaports, have not learned English. A survey in Philadelphia by Temple University showed that about 13% of the population did not understand or speak enough English to be of value in a serious clinical setting.

Hospitals have adopted several types of administrative devices to insure the presence of interpreters when required. The Temple University hospital recommends publication of a multi-lingual handbook consisting of phrases and questions needed at the bedside.

Other hospitals maintain rosters of hospital employees and outside volunteers who are fluent in one or more foreign languages.

Another communication aid for patients with visiting relatives would be to ask any bi-lingual visitors to write out bedside phrases in English and in the patient's tongue and maintain the list in the sickroom for use by all hospital attendants.

Such strategems are important for history-taking and eliciting progress reports from the patient. In addition, one of the valuable fundamentals of encouraging a sick patient in order to gain and maintain confidence in the healing process is oral communication. A sick person in a strange environment gains

CONTINUED ON NEXT PAGE

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emotional strength and enjoys faster recovery when, at least, part of the doctor-nurse-patient talk is something the invalid understands.

All hospitals, great and small, should have as many interpreters on call as possible and should have phrase books and home-made translation glossaries for all patients who are isolated from the only language they understand.

Cruel and Inhuman Punishment

Guest Editorial

Our courts of law (not justice), the lawyers who practice in them, and the judges who preside over them make a great fuss over the concept of "cruel punishment." They can engage in nitpicking contests ad nauseam about such concept.

In the pre-historic days of the 1930s when Packard automobiles were the ultra fine status symbols, Packard used an advertising slogan, "Ask the man who owns one." In the field of cruel and in-

human punishment, I see nothing more cruel and inhuman than our legal system. To paraphrase that old Packard slogan, I say "ask the man who has been in the courts." Some of us have been hit with malpractice suits; those who have not been know someone who has. Guilty or innocent, there ensues months or years of psychological torture while the system plays psychological torture games with all concerned.

We like to think that life itself is our most valuable and precious asset. Yet, we read in the newspapers quite regularly of prisoners on "death row" in the penitentiaries asking for the executions of their sentences while "the system" continues to torture them with delays and requests for stays of execution. What better proof of the torture of the system do we want than this type of evidence from the lips of those who have spent years of their lives in the torture of the system.

It certainly seems to me that the "Hanging Judge" of TV Western shows was much more humane than the present judges who now preside over the twentieth century courts of our Nation.

I agree with the Constitution of the

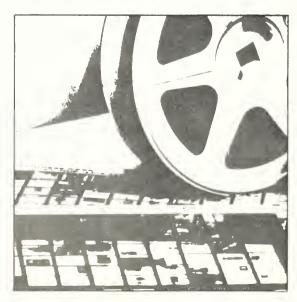
United States and its article which bans cruel and inhuman punishment. I accuse our legal system of fostering such conduct.

Can anything be done about this crazy system which punishes the innocent in such barbarous manner? I doubt that much short of indictment of the perpetrators of such crime (the judges and lawyers) would be effective. We have created another Bureaucratic Monster in the legal system. Characteristic of all bureaucracies is their evolution to the place where they serve themselves rather than the people they were expected to serve—when they were created.

Since my suggested solution to the problem is probably unacceptable, I offer another solution not only to the problem of the legal bureaucracy, but a general solution to all self-serving bureaucratic monsters: the cutting of all bureaucratic budgets by 20% per year for the next four years. Such action would require the cooperation of the Congress. We need to remind ourselves and our Congress that "the hand that controls the purse strings is the hand that rules the world."

-L.A. Arata, M.D., Shelbyville

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JCAH Medical Staff Standards



GEORGE T. LUKEMEYER, M.D.

President
Indiana State Medical Association

■ HE JOINT COMMISSION on Accreditation of Hospitals approved the definitive language for the new medical staff standards Dec. 10, 1983. Revision of medical staff standards began four years ago. The proposed standards were sent out for four field reviews and, in each instance, comments were solicited from approximately 4,000 reviewers. Intense interest in these new standards generated many sharp comments. Acute differences of opinions have been eloquently expressed about the composition of the hospital medical staff, the executive committee and the granting of admitting and clinical privileges. Please review the new standards carefully before you make final judgments or recommend any changes in hospital medical staff bylaws.

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A Message from the President

The new medical staff standards do allow for some categories of nonphysicians to be appointed to the medical staff, to admit patients and to be granted clinical privileges. The JCAH commissioners are keenly aware that there is a fundamental desire to see that anyone sick enough to require inpatient hospital diagnosis and treatment deserves quality medical care. In balancing the grant of access by limited licensed practitioners to admitting and clinical privileges with the assurances that hospitalized patients receive care of appropriate quality, the new standards have six specific provisions calling for physician participation in insuring optimal medical care.

Provisions to New Standards

- The executive committee of the medical staff must have a majority of physicians. The executive committee makes recommendations on all staff memberships, and admitting and clinical privileges.
- Admitting privileges are determined, in large part, on criteria for standards of medical care established by the medical staff.
- All members of the medical staff and all others with clinical privileges are subject to medical staff and departmental bylaws, rules and regulations, and to the hospital's quality assurance program reviews.

ISMA Annual Meeting

Begin to make plans now to attend the ISMA Annual Meeting in Indianapolis next fall. Mark Oct. 19-22, 1984 on your calendar as an opportunity to attend and participate in the activities of your state association at its annual session.

- When non-physicians are granted the privilege to admit patients, there must be a prompt medical evaluation by a qualified physician of all such patients. (This provision does not apply to qualified oral surgeons who have been granted the clinical privileges to perform a history and physical on patients without medical problems. Qualified oral surgeons were allowed this clinical privilege in prior medical staff standards.)
- Each patient admitted for inpatient hospital care has a history taken and a comprehensive physical examination performed by a qualified physician who has such privileges.
- The general medical condition of every patient is the responsibility of a physician member of the medical staff.

It is anticipated that the full text of the new medical staff standards will be published soon and available to hospitals and medical staffs. Be sure to read these standards carefully. For each applicant a meticulous review of documented and verifiable information relative to current professional competence should allow medical staffs to make decisions regarding membership, admitting privileges and designated clinical privileges that will secure quality medical care for patients in acute care hospitals.

Effective Date

The effective date of the revised standards will probably be July 1, 1984. JCAH surveyors will utilize the new standards after this date. To assess the impact of the new standards, the recommendations resulting from the survey of the revised standards will not affect a hospital's accreditation status until surveys conducted after Jan. 1, 1985.



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In Praise of PACs



DONALD F FOY
Executive Director
Indiana State Medica Association

A Message from the Executive Director

the emergence of a whole new area of political activity, characterized by the prevalence of political action committees. These so-called "PACs" are responsible for bringing a whole new generation of people into the world of campaign contributions. More importantly, PACs attempt to correlate political behavior in campaigns with political behavior in governing more tightly than has been the case in the recent past.

Political action committees are bringing informed interest groups out in the open so that we can begin to see a real relationship among the way people behave in elections, the way people behave in contributions, and the way congressmen vote. PACs can move us away from what the Founding Fathers teared our democracy would drift toward—an atomistic society.

In the atomistic model of a free society, there is a general, vague "common good" which, as a practical matter, is given to us by a Ralph Nader or a John Gardner. It is communicated through television, and then we as 225 million individual atoms working in a plebiscitary system say, "Yes. Do this. No. do that." This is precisely the Aristotelian vision of mob politics which the Founding Fathers feared might be the end of our democratic experiment.

The only workable alternative to that system is a mediating institutional society in which a great number of small subgroups, acting separately, protect both the individual and the government. This new mediating institution is the political action committee. It is not geographic but instead, is based on common in-

terest. It's tied together by newsletters, mailgrams, and annual meetings. It is at least as accountable as was the big-city machine. After all, people don't have to contribute to them.

To attract contributions, the PAC has to in some way reflect the interests of the people who give to it. Because the PAC is organized, it allows the individual voter to know that somebody is watching out for his interest—and is probably doing a better job of it than is his congressman. That congressman, after all, has to represent 10,000 differing interests—or as many as will be found among his hundreds of thousands of constituents.

People who say that PACs are bad, in effect, are saying that voters ought to elect people on a single set of campaign promises, who should then be allowed to do anything they want to between campaigns. That's their bottom line—that campaign promises, and the contributions they encourage, should have no relationship to the actions of the people that the money and the promises elevate to Congress. This is absolute nonsense! To say that "special interests govern the Congress" assumes special interests are a monolith, and today there are more than 3,500 different PACs.

In the long run, the best defense against political action committees is more political action committees. The more of them there are, the harder it will be for any one, five, or ten to have any undue influence. A free society needs a free competitive system. For my part, I have more faith in private dollars freely given by free citizens to PACs that will be their watchdogs than I do in any kind of public financing of congressional cam-

paigns. If the congressman whom you distrust because he will be "corrupted" by PACs would be in charge of a public financing system, why would you trust that public financing system?

We worry today about apathy and about the growth in the powers of government. The political action committee addresses both of these concerns. Its capacity to educate, to heighten interest in candidates and issues by raising money, and to stimulate individual involvement in campaigns—these are surely salutary activities, and much needed at a time when millions of Americans fail even to perform the most basic responsibility of citizenship.

The heterogenous nature of American business and professional groups suggests that PACs, rather than endangering the political system, in fact enhance it. The more political committees that are generated, the greater the multiplicity of interests that will be promoted and, thus, the more individuals that will find a home in the political system.

The challenge confronting us in the future is to steadily increase the relationship between a person's vote and the behavior of the government. PACs are a strong and healthy step in that direction. We need more, not fewer!

With the emergence of 1984 as an important election year, it would be appropriate for physicians to resolve to become more involved in the political process. Industry as well as government at all levels are taking an increasing interest in medicine. All too frequently this interest is translated into legislative or regulatory language designed to place increasing government curbs on the practice of medicine.

For physicians and their families, political involvement can, of course, take several forms. An obvious one is to make a contribution to a candidate or candidates of their choice. Another effective form of involvement is active participation in the campaign of a candidate. Beyond that, physicians and their families have the opportunity to participate in one of the most effective political organizations—the Indiana Medical Political Action Committee (IMPAC) and its affiliate, the American Medical Political Action Committee (AMPAC).

The AMA actively works to WHY AMA? represent your interests by fostering legislation that is beneficial both to the medical profession and the public. Each year the AMA makes thousands of contacts with members of congress and their staffs and frequently translates Association policies into model or draft legislation for governmental action. Active representation of organized medicine: it's one more good reason why you should be part of the AMA.

WHY AMA? Today you can have instant access to a broad range of up-to-the-minute clinical information and protocols for use in patient care through the Medical Information Network. This nationwide, computerized system was developed by the AMA, with General Telephone and Electronics (GTE), to provide you with the most advanced, current scientific information. It's one more reason why you should be a part of the AMA. To Join, Contact your county or state medical society or write: Division of Membership.

AMA, 535 North Dearborn Street, Chicago, Illinois 60610 or call collect, (312) 751-6196.



Our True Nobility

A Report from the Commission on Physician Impairment

LARRY M. DAVIS, M.D. Indianapolis

IMES WERE HARD in 1932 when my father, Marvin R. Davis, decided that he would follow his desire for medical school. Dr. Dale Dickson of Greensburg had strongly encouraged him to pursue medicine several years before, and he had never quite given up the idea. Money for such prolonged education was not easy to obtain and his family could be of little help since they had lost the family farm to the Depression and had resettled on a small piece of farmland at the outskirts of Letts, Indiana, a small town south of Greensburg.

Working his way through medical school and using the savings he had accumulated in nine years of teaching, Dr. Davis completed his M.D. and a year of internship at St. Vincent Hospital in Indianapolis by 1940. He settled in Columbus, married his sweetheart of several years, and opened practice with Dr. Walter Fisher, a well established, Co lumbus area general practitioner. He began solo practice in 1948.

At a Bartholomew County Hospital Board of Trustees dinner held in his honor on Sept. 13, 1983, Dr. Davis recalled that in 1940 he and other physicians treated pneumococcal pneumonia by serum type matching, sometimes with poor results. Antibiotics had not been introduced, house calls were a primary treatment modality, and "high tech" medicine was 20-plus years away.

Following his career through the current process of his retirement from medicine illustrates for us several important lessons. These lessons are

The author is chairman of the ISMA Commission on Physician Impurment.

centered around capturing the knowledge of our seniors concerning humanistic medicine via changing our attitudes for dealing with our senior physicians and their retirement from medicine. Details of Dr. Davis' medical experiences may help us and the ISMA Commission on Physician Impairment to increase our awareness of and appreciation for our recent heritage.

A history of postoperative laryngeal tumor (benign) caused rejection by the Army, and as one of the significantly reduced number of doctors in Columbus, his practice demands increased to a level of office calls until midnight several nights a week, and an obstetrical caseload in excess of 200 deliveries a year. His efforts at a balanced lifestyle under such pressure included community activity as county coroner for 13 years, and activities with the Boy Scouts of America including Region Seven physician at two national jamborees.

In spite of a truly extraordinary pace, Dr. Davis devoted most of his spare time to woodland activities with my brother, James Davis, M.D. and myself. His wife, Martha, as was so often the case in this "old style" practice of medicine, was tireless in both her physical support of his lifestyle and practice, and also her emotional commitment to the philosophy that the care of patients and the practice of medicine came first. (The shift 1 see in the attitudes of doctors' wives is so significant as to deserve another paper.)

In 1960, at the age of 56, the pace caught up with him in the form of a fairly severe CVA. Within six months his expressive aphasia had improved to the point of return to practice, which he has done for an additional 23 years, struggling frequently with his handicap, which demanded laborious effort to slowly express his otherwise perfectly normal

thoughts. Over recent years, his outstanding efforts to maintain competence in current medicine led to the establishment by Bartholomew County Hospital of the Marvin R. Davis, M.D. Award for Excellence in Continuing Medical Education.

Finally feeling a need to retire on approaching his 80th birthday, he agreed to receive a retirement celebration in September 1983. Bartholomew County Hospital responded by inviting the Davis family to a Board of Trustees' dinner, the medical staff formally commended him for his contribution to medicine, the hospital held a staff reception in his honor, and the Mayor's office declared the week of Sept. 11-18, 1983 "Marvin R. Davis, M.D. Appreciation Week". As we recognized the need of the community to express its appreciation to him, Jim and I threw a party inviting the citizens of the community to join us and share in the celebration. About 750 people attended a fun-filled Sunday afternoon and, although initially embarrassed by the idea, Dr. Davis had a wonderful time. The many patients and friends attending seemed to relish the opportunity to personally express their thanks and many memory anecdotes were directed to him.

He and his generation of doctors have served us 40 to 50 years, becoming old in the passage of so much time, full of wisdom and experience, eager to talk and, for the most part, still eager to learn. Unfortunately, such notable individuals, most marked by outstanding efforts as practicing physicians, are being criticized for ineptness, lack of technological sophistication, or worse, "senility." All too often these elderly physicians are actively pressured into retirement as incompetents in a system so concerned with "peer review" that it

fails to recognize its own nobility.

These men, partly through necessity and often out of warmth and love, practice the art of medicine by understanding and enhancing the patient's own resources to the maximum. Although they might not use these words, our older physicians often understood the shaman role (priest-healer) they held in society and generally behaved in a way that allowed the community at large to see them in this important light. They worked extraordinarily long hours, usually in solo practice, making hospital rounds, office appointments, evening house calls, and middle-of-the-night deliveries, generally without complaint and without great financial gain, in light of the extensive hours worked.

There are elements of the practice style just described that are no longer necessary or desirable. However, the steadily diminishing emphasis on the "art of medicine" is, in my opinion, causing many of our image problems and increased malpractice litigations. Also, in the broadest sense, the overall quality of medical care in America has suffered from our disenchantment with the art of medicine and idolation of technology. Due to the unusually good personal opportunity to observe this shift toward technology and away from humancentered medicine that I experienced, I'd like to take an extra moment to briefly describe my personal observations of changes in the style of American medicine.

At a very early age, I knew that I wanted and expected to be a physician. By the time I was 14 my two favorite areas of attention were automobiles and driving, and the general practice of medicine. Dad provided answers for both pursuits by allowing me to drive him around Columbus, Indiana and vicinity while he made house calls, accompanying him into the homes of many. I witnessed first-hand the interaction between doctor, patient, and patient's family, and saw the mutual esteem that physician and patient held for each other in that environment. As a doctor's son in the community, I also felt the power and influence that a physician held.



Marvin R. Davis, M.D.

By the time I experienced medical school, technology in medicine was rapidly expanding, house calls were disappearing from American medicine, emergency rooms were moving toward "convenience clinics." We experienced essentially no lectures in medical school on the physician/healer/priest role, or even bedside manner and medical ethics.

By the 1980s we are in the age of high tech medicine at steadily greater cost, facing fears of litigation by defensive medical procedures. Competition among ourselves is on the increase with a probable glut of physicians in urban practice by the end of this decade. Too often now, medical environments are deemphasizing the whole person and his/her needs, in favor of a technological concept that indicates that the proper sequence of tests objectively ordered by a somewhat compulsive physician, or a medical or surgical procedure administered with the same rational tone, is the highest and best form of medicine.

As chairman of the ISMA Commission on Physician Impairment, I am seeing numbers of physicians somewhat or significantly impaired, in part by the loss of both the prestige and the human artistry from their practice of medicine. I believe it has become critically impor-

tant that we re-emphasize the physician's role as shaman or healer of the tribe. We need to be willing to thoroughly explain our diagnostic impressions to our patients, to inquire as to how they are feeling (and really mean it), and to balance our own lifestyles so that we enjoy both the practice of medicine and our personal lives.

I believe that one of the ways we can re-emphasize these traditional medical philosophies is to acknowledge the importance of our senior practitioners to today's medicine. Older doctors are not simply outdated and uninformed relics, but sources of knowledge about a style of medicine. Society is reacting to us in mixed fashion today in part because we have drifted in the last two to three decades away from physician tradition over 2,000 years old.

The Indiana State Medical Association's Commission on Physician Impairment would like to strongly encourage hospital medical staffs or county medical societies to create programs expanding on these basic thoughts. Furthermore, we would suggest that legitimate efforts be undertaken to honor senior physicians at the local level. The commission has found that older physicians showing evidence of impairment are most willing to retire or greatly reduce privileges in exchange for the formal recognition they so richly deserve. Finally, we suggest that programs be established on a local level to encourage senior physicians in the medical community to speak individually or by panel to their experiences and viewpoints about medicine.

In this process we will at least have formally recognized and appreciated our senior physicians and gotten all of us back in touch with our medical elders as the true nobility of medicine. In the process, we must actively listen to their knowledge. Impairment secondary to advanced age or accompanying disease warrants sensitive treatment, not simply being quietly shoved out to pasture. The commission encourages those of us who will practice further and deal with the struggles and uncertainties facing American medicine, to respect, honor and learn from our seniors.

The Doctor as Teacher, Citizen, Parent

HUNTER A. SOPER, M.D.
JOHN C. KINCAID, M D
MARY E. SOPER, M D.
Indianapolis
DOUGLAS L. SMITH, M.D.
Salt Lake City, Utah



THIS ELDERLY LEPER graphically represents the needs of the sick, elderly and hungry in the Third World.

From the Methodist Hospital of Indiana, Inc; the Dept. of Internal Medicine and Neurology, Indiana University School of Medicine; and the Latter Day Saints Hospital, Salt Lake City, Utah.

Correspondence: Hunter A. Soper, M.D., Methodist Hospital, Office of the Medical Staff, 1604 N. Capitol Ave., Indianapolis, Ind. 46202.

Abstract

The authors describe their medical experiences in Zaire in 1975 and in India in 1980 and report on a novel use of the Medical Knowledge Self-Assessment Program for supplementing the education of medical students taking electives overseas. They describe some of the medical problems besetting developing countries and tell why it is important for Western physicians to face up to these problems. Such overseas experiences are recommended to older and younger physicians alike as a means to promote inter-generational rapport and to broaden perspectives and attitudes regarding their responsibilities as physicians.

At one time we took it for granted that

Western medicine was the best and that it was our responsibility to bring the rest of the world up to our level of enlightenment. Recent developments have forced us to rethink these ideas. The modest progress made toward improving world health in the last century has halted or regressed. Charges of the irrelevance of modern medicine have been strongly reinforced in our country by public acknowledgment that, in our striving to attain professional perfection, we have lost sight of our primary mission of meeting the health needs of our people. In this report the authors discuss a unique experience in medical education in a remote bush hospital in the Republic of Zaire and a church hospital in northcentral India.

N A DEVELOPING COUNTRY where the annual per capita income is less than \$100, the quality of life is superseded by the struggle for survival. The public is not dazzled by the medical spectaculars such as heart and kidney transplants, progress in cancer research, or news items about progress against this or that disease

Africa's health situation can be crudely assessed from the following indices: neonatal mortality, 50-80 per 1,000 births; infant mortality, 100-200 per 1,000; cumulative mortality from 0-5 years of age, 300-500 per 1,000; and, a maternal death rate of 5-10 per 1,000, deliveries or 10-20 times higher than in Europe.²

Our visit in Zaire opened our eyes to the fact that over 500 million persons in the world still acquire malaria each year. We saw the whole spectrum of the disease from fatal cerebral malaria in infants to a nuisance illness. We saw some of the 300 million people who get schistosomiasis each year, the 250 million who suffer from filariasis, and the 10 million who have leprosy. As if these unusual tropical diseases weren't enough, we found that Humphrey³ is correct when he says that the ratio of mortality for common infectious diseases like influenza, bronchitis and pneumonia in a "poor" country is two to three times greater than that in a "wealthier" country. The discrepancy in death rates goes on up the scale to 300 to 1 for whooping cough. Numbers of children died when we were in Zaire from a combined epidemic of measles and whooping cough.

We have evidence that in the outlying villages as many as 30% of the unvaccinated children die during a measles epidemic. The World Health Organization has done a fine job in Zaire promoting smallpox and BCG vaccinations but our hospital had one of the few organized programs to promote measles immunization. We were distressed at the low priority given such programs.

In India, also, wide varieties of infec-

tious diseases were seen and treated. Most prevalent were tuberculosis, malaria, and typhoid fever with their protean manifestations. There were significant numbers of cases of polio, ascariasis, giardiasis, tetanus (including tetanus neonatorum), cholera and leprosy. In contrast to the remoteness of Kapanga, Zairc, we found Mathura to be a town ("village") of 300,000, with perhaps one million more people living within a 50-mile radius, located in one of the poorest and most backward districts of India. Consequently, diseases promoted by crowding, poor nutrition, and poor sanitation were prevalent. Protein calorie deficiency and vitamin deficiency syndromes were frequently seen. Anemia secondary to the above diseases was widespread with an average hemoglobin level among hospitalized patients being 7 grams. Anyone with a hemoglobin of 10 grams or above was a candidate to be a blood donor.

A valuable part of both educational experiences was the use of the American College of Physicians Medical Knowledge Self-Assessment Program materials. We feel our use of these materials was unique⁴ and we encourage other experiments of this type. In 1973 the American College of Physicians moved to strongly support education as the goal of self-assessment by bringing out an extremely valuable syllabus covering advances of the last five years in nine separate subspecialty areas of internal medicine. Associated with the syllabus



DR. SOPER, right, poses with other members of an American medical team that visited missionary medical personnel at Piper Memorial Hospital, Zaire, in 1975.

where 80 questions in each of the subspecialty areas designed to emphasize the important points and to strengthen the learning experience.

In our program in Zaire these nine subspecialty areas were each allocated a week for intensive study. The complete lack of outside distractions in the remote bush station allowed the students to spend 15 to 20 hours a week reading the section of the 1975 Medical Knowledge Self-Assessment Program syllabus assigned and current medical textbooks where basic knowledge was felt to be lacking. The associated test was taken with access to the proper answers and then poorly understood questions were

discussed as a group. At the end of the week the students were given the 1973 Medical Knowledge Self-Assessment Program examination over that specific subspecialty without access to the answers. A profile of strengths and weaknesses in internal medicine was obtained and an overall academic letter grade was obtained and turned in to the Indiana University School of Medicine for their clerkship time.

Again in India, the Medical Knowledge Self-Assessment Program V was made an integral part of our experience. We prepared by reading each syllabus before leaving this country and by the senior author attending three review sessions sponsored by the American College of Physicians. There are now 12 subspecialty areas and only five or six days could be spent studying each section. Again, a total lack of outside distractions allowed many hours of study and discussion of the excellent material in the syllabus.

The profile Mr. Smith obtained in the examination accompanying each subspecialty showed where further study efforts were needed and also provided an excellent review for the FLEX examination. As a final review, we both went over each question and answer provided and usually ended up with half a



THIS HOSPITAL in India provides excellent medical care with minimal financial resources.



EXAMINING a small patient is first done by a student nurse and then by a graduate nurse. Most of the care is performed by nurses, with only the sicker patients being referred to the doctor. Rounds are made regularly by physicians to review care being given, to make suggestions, and to upgrade care.

dozen topics about which we were compelled to do some extra reading. This learning experience was very valuable for the senior author who is a member of the American College of Physicians, and served as his study for the recertification examination taken in the fall of 1980. We encourage all training programs involving medical students, house staff and teaching staff in private practice to find new constructive ways to integrate this material into their programs.

One of the criticisms often made of medical study in developing countries is that, due to its emphasis on "tropical diseases," the experience is not relevant to modern medicine as practiced in the United States. We feel that structured use of the Medical Self-Assessment Program materials nullifies this criticism by confronting one with the recent advances in internal medicine theory, practice, and

technology. This provides a splendid contrast to the daily experience with "tropical diseases" and brings into focus the problems of health care in both developed and developing countries.

It is at times frustrating to deal with cultural attitudes quite different from our own and to try to provide good health care within the context of facilities considered deficient by Western standards. Through such frustrations comes understanding and personal growth. Laboratory facilities and diagnostic radiology facilities are limited, at best, in most developing countries. In such situations, a physician must sharpen his skills of physical diagnosis and act on the basis of his clinical judgment. Being confronted with divergent views on health care, sickness and death forces one to scrutinize and perhaps modify his own attitudes on these topics.

The most sobering lessons in ventures of this type are those of medical economics—lessons which influence the participants' views of their own country's health care system. Dans described a three-month elective he took in India as a medical resident in 1963' and how shocked he was to find that prepackaged sterile intravenous sets and nonpyrogenic sterile intravenous fluids were not available worldwide. We experienced the same medical culture shock after seeing disposable syringes resterilized and used over and over again, not a dozen times but rather hundreds of times.

Dans highlights our medical problems in this country as follows: "With every increment of access and availability in our health care setting, the marginal gain has been less and the cost greater. Our glut of options has made us less careful in establishing probabilities and in setting priorities for resource use. This thesis is not a new one; however, in our complex society, one is quickly sobered by the difficulties in responding to eloquent calls to protect the medical commons. Like patrons at a one-price, allyou-can-eat buffet, patients and physicians can stuff themselves with tests and procedures, discarding a plateful of 'noncontributory' data or use 'just enough' and not be wasteful. The trick is agreeing as to what is 'enough,' when access and availability are unlimited. Consensus about the need for restraint is easier to achieve when the resource limitation is unmistakably severe as in Malawi. It is hard to be spartan in the midst of plenty, especially when there are few incentives and serious disincentives. In a society seeking to become risk-free through legislation and the courts, penalties for restraint are great and for overkill, almost nonexistent."

An experience such as we describe for medical students to study abroad is utilized by close to 60% of the medical students of the University of Dundee in Great Britain, and is being sought by an increasing number of our medical students in this country. It certainly provides an added dimension as they look at the waste and high dollar technology

of our health care system to know that 7 million blind Indians could be given their sight by cataract surgery costing \$5 for each operation. It should give us all cause to think that 10 of every 11 babies born into the world this year are born in poor and underdeveloped countries.

The horizons of each of us in the United States need to be broadened and, whether we like it or not, the interdependence of all of us who are on this special satellite called Earth makes it impossible for any of us to live in a medical castle untouched by the Third World time bomb that is ticking away.

Addendum

Interested physicians of any age can get helpful information on a church-related, foreign medical experience by writing: Dr. J. Kenneth Forbes, Operation Doctor Program, Indiana Area United Methodist Church, 1100 W. 42nd St., Indianapolis, Ind. 46208; Dr. Steve Jay, V.P. Academic Affairs, Methodist Hospital, Indianapolis, Ind. 46202; or the senior author.

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DR. CHARLES H. KLAMER of Jasper, center, leads an operation. Good surgical work is done by indigenous physicians and nurses, who are eager to learn new techniques and procedures.



THE OUTPATIENT BUILDING in Zaire where ambulatory patients are treated and decisions are made about the need for hospitalization.



AUXILIARY REPORT

Hulda Classen (Mrs. Peter) President, ISMA Auxiliary

Alfrieda Mackel Vice President Northern Area

Margaret May is an ardent and enthusiastic medical auxilian who has contributed her many talents to the medical community since she became Mrs. R. Milton May and became a charter member of the Lake County Medical Auxiliary in 1940.

She and Dr. May did not become rocking chair retirees when they returned to his ancestral Squire Boone family farm in Harrison County in 1965. Dr. May became a family practitioner. Margaret, with great gusto, after discovering that many neighboring families traced their ancestry back to the 1770s, helped to transform the area into a national historical attraction. She worked for the development of a road and improvements to the Squire Boone Caverns, and she built, nearby, the Hannah Boon Cabin for her display and sale of local craft items.

The illness of Dr. May precipitated their move to an apartment home in the Lutheran Home Retirement Center in Fort Wayne in 1978, Surrounded now by her family antiques, precious memories of family, friends and her activities, Margaret takes great pride in her auxiliary activities in the Lake County Auxiliary, in the ISMA Auxiliary as a member-at-large of Harrison County, and currently as a member of the Allen County Medical Auxiliary.

When Dr. May retired as assistant chief of surgery for U.S. Steel in 1965 and returned to his Harrison County farm and medical practice, Margaret left a busy life rearing four children, working in auxiliary and civic and political activities. To maintain her interest and association with the medical auxiliary, she became a member-at-large, a membership category where there is no organized county auxiliary. When Joanne Tharp, the newly appointed ISMA-Auxiliary liaison for members-atlarge for 1983-1984, found Margaret living in Fort Wayne, she urged her to join the Allen County Medical Auxiliary.

After meeting Carolyn Tyndall, president of the Allen County Auxiliary, and joining the auxiliary, Margaret wrote, "I have such pride in knowing I am a member of the Allen County Medical Auxiliary. I have felt like a step-child as



Carolyn Tyndall (right), president of the Allen County Medical Auxiliary, presents a program booklet to Margaret May. A needlepoint rendition of Hannah Boon was made for Mrs, May by her son and daughter.

a member-at-large. Having been both, there is the difference of black and white."

Are there other members-at-large who share this feeling? Would they be interested in organizing an auxiliary in their county or with a neighboring county?



Margaret May and Alfrieda Mackel examine a doll from the Hannah Boon Cabin display.



Artist's drawing of Hannah Boon's cabin adjacent to Squire Boone's Caverns in Harrison County. Margaret May built the cabin to display and sell local craft items.

"We believe the malpractice picture CAN change—if we first help each other understand the problems and then tighten our controls."

Pennsylvania Casualty Company's physician executives discuss their roles in the company's ongoing effort to reduce and control malpractice risks.



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Joseph A. Ricci, M.D. Associate Medical Director

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BOOK REVIEWS

Current Concepts in Erythropoiesis

Edited by CDR Dunn, Baylor College of Medicine. Copyright 1983, Wiley and Sons, New York. 415 pages, \$45, hardcover.

This book will be tough going for persons looking for quick answers to obscure problems in anemia and polycythemia. However, the knotty problems in hematology very often do not have easy solutions. In the 15 chapters of this volume, 33 collaborators present up-to-date research results that may lead to fruitful diagnosis and treatment, helps not neatly recorded in standard texts.

Most practicing physicians are familiar with the definition given in the first chapter, "Erythropoietin is a renal hormone designed to adjust the size of the red cell mass to the need for oxygen in the tissues." It has now been determined that the chief site of production is the renal cortex although a proportionately less smaller portion comes from the liver. The oxygen level in the blood is the sensor regulating erythropoietin (EPO) production. Whether hepatacytes or Kupffer cells are responsible for its appearance in the liver has not been determined.

Most investigators agree that the anemia of chronic renal disease is due to the failing capacity of the kidney to make EPO. The same view is held re other chronic debilitating diseases not associated with hemorrhage. Along with these disorders often there is a con-

Psychiatrist

M.

Psychiatrist

Rum

"I enjoy filling out government forms."

comitant diminution of T_3 and T_4 . Sometimes the EPO level can be raised slightly by thyroxin replacement alone. If starvation is the cause of the anemia, and there is little or no permanent kidney damage, administration of glucose and T_3 together restores EPO fairly promptly.

Just how EPO acts to reverse anemia is not well understood. Apparently in the hierarchy of stem cells there are progenitor EPO responsive cells. EPO hastens their change into erythroblasts. It also seems to be required for the early release of reticulocytes via surface receptors and intracellular secondary messengers.

In the various chapters the involvement of erythropoietonin functions of other body systems such as the immune regulators, the endocrine glands, protein synthesis, etc. is considered.

I found the account of the effect of physical exercise on plasma volume and red cell mass of considerable interest. Recent studies have shown that in trained athletes the immediate effect of fairly strenuous exercise is to reduce plasma volume by 200 ml. to 600 ml. Exertion augments capillary pressure resulting in enlargement of the functional capillary bed. Fluid filters through pores of the capillaries into the surrounding interstitium. Osmotic pressure in the latter tissue is augmented by lactic acid and other osmotic substances which result from exercise. A drop in venous pressure during prolonged exercise offsets to some extent the rise in arterial pressure in small vessels. During rest only 15 to 20% of cardiac output is diverted to muscle. When one exercises vigorously this figure may change to as much as 85%.

In contrast to blood volume, red cell mass changes very little with exercise. After a 100-yard sprint the red blood cell count may temporarily rise as much as 24%. In a trained athlete in a two-mile run there is a much smaller rise—8.8% in one series. These changes are due to a shift of fluid from intravascular to extravascular space. This flow of fluid in and out of the intravascular compartment is regulated by other forces such as water loss by sweating and binding of fluid in muscle by storage of up to 800 gm. of glycogen. The latter binds water significantly. The proteins entering the intravascular space via lymphatics water significantly. The proteins entering the intravascular space via lymphatics also play a role. One gram of protein binds 14 ml. of water.

So-called "sports anemia" occurs in untrained persons undertaking vigorous exercise. This may be a spurious phenomenon resulting from an expanded total blood volume without a concomitant increase in red cell mass. On the other hand, it has repeatedly been shown that in vigorous exercise, especially running, there is actual destruction of red cells. It is interesting that this destruction occurs chiefly in the vessels of the soles of the feet. (The author recommends "Serbo" inner soles for running shoes!)

In trained "endurance" athletes, in contra-distinction to untrained athletes undertaking vigorous exercise, the Hb and Hct are not only normal, but somewhat increased due to increased protein synthesis which their kind of training enhances.

Other chapters, particularly those relating to the immune system and to weightlessness in astronauts, are equally fascinating.

As noted above, this is not a book useful for quick answers to problems of therapy, but for those looking for new concepts to explain old observations it will be rewarding.

Paul S. Rhoads, M.D.
Richmond
Internal Medicine



"I was over to see Dr. Wilson and he was very bullish about my high blood pressure."

Merck Manual of Diagnosis and Therapy

Copyright 1982, Merck, Sharp and Dohme, Rohway, N.J. 2,578 pages, \$19.75, hardcover.

The Merck Manual "ain't what it used to be." First published in 1899, new editions have come out every few years, the present one being the 14th. For nearly 50 years the pocket-sized manual was a routine part of the equipment of every house officer along with his stethoscope and flashlight. Not anymore. Its cover dimensions of 8 by 5½ inches are smaller than most medical texts but it is 2½ inches thick.

Its information is up-to-date, as the former editions were, but much more comprehensive. Essential facts about practically any medical problem encountered by primary physicians are presented, but not in detail. For instance, the present views about the actions and indications for propanalol are fairly well discussed. The differences between this drug and its close neighbors in the Beta Blocker group are only superficially defined. Of the calcium channel blockers only Nifedipine and Verapamil are mentioned; no differences in their action or indications are stated. Most all of the data regarding laboratory tests are useful. The indications, normal limits of results, special precautions in taking and preserving specimens, etc. are given in even more detail than in the original manuals



of the first half of this century. In addition to short discussions of laboratory tests related to the many clinical conditions described in the book, eighteen pages are devoted to tabulation of normal laboratory values in the Massachusetts General Hospital. This is invaluable material such as the Merck Manual has always carried.

The list of editors and contributors to this 14th edition is impressive. It will not be carried in anyone's pocket anymore or in any physician's "rounding" bag unless the latter is an oversize one. It is too bad that no references appear for any of the many chapters. One wonders if the statement in the preface that "Today the Manual is the most widely used medical text in the world" can be authenticated. The volume will be useful for quick reference for any physician who consults it.

Paul S. Rhoads, M.D. Richmond Internal Medicine

Mnemonics, Rhetoric and Poetics for Medics

By R.L. Bloomfield, M.D. and E. Ted Chandler, M.D. Copyright 1982, Harbinger Press, Winston-Salem, N.C. 222 pages, \$9.50, softcover.

This compendium of medical whimsies in the form of mnemonics, lists of differential diagnoses and occasional historical notes relating to ancient medical practice defies classification except by its own title, and for the most part its appeal depends upon the mood you are in when you pick it up. In some parts it seems bewildering but in others I can see how a medical student might be somewhat refreshed by the unconventional point-of-view shown in many of the mnemonics. These are intended to help at times of bedside puzzlement, as noted in the preface—itself one of the better parts of the book.

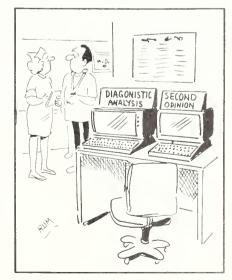
The bits of ancient lore scattered through the text are a stimulating change, the one on the School of Salerno being especially well done. Strangely enough, the only mnemonics I remember from medical school were acquired in anatomy lab, while dissecting cadavers, while the far greater part of the mnemonics in this book applies to clinical problems.

One aspect of this publication which is downright troublesome is the printing format, with almost no margins to the page. The side margins are 3/16 inch, for both bound and free edge, with a top margin of 3/8 inch and a bottom margin of 9/16 inch. This makes one read around a curve at the bound edge, which process becomes exceedingly tiresome.

A. W. Cavins, M.D. Terre Haute Gynecology

The Delacorte Press has released Healthy People in Unhealthy Places: Stress and Fitness at Work. The book is justified by the statement that: As the health craze continues to sweep the country, more and more people are replacing junk food and smoking with green vegetables and jogging. However, with work occupying from one-third to onehalf of most people's waking hours, healthy environment at the perimeter of the workplace cannot make up for 8 or 9 hours a day of stress, poor lighting, noise, bad ventilation and toxic hazards. The author, Dr. Kenneth Pelletier, advised on improving working conditions while demonstrating the corporate savings inherent in such programs. 240 pages, \$16.95.

The National Foundation for Ileitis and Colitis has published *The Crohn's Disease and Ulcerative Colitis Fact Book*. It is a layman's guide to understanding everything known about the two diseases, from definition to treatment. 194 pages, \$14.95.



1983 MEMBERSHIP REPORT

December 31, 1983

COUNTY	PAID	EXEMPT	ISMA TOTAL	AMA TOTAL	COUNTY	PAID	EXEMPT	ISMA TOTAL	AMA TOTAL
Adams	12	2	14	10	Marshall	21	0	21	17
Bartholomew-Brown	75	12	87	68	Miami	21	3	24	18
Benton	4	1	5	2	Montgomery	21	6	27	20
Boone	16	6	22	12	Morgan	16	4	20	14
Carroll	7	3	10	10	Newton	5	0	5	1
Cass	36	6	42	24	Noble	12	1	13	10
Clark	80	1	81	49	Orange	6	1	7	3
Clay	9	2	11	6	Owen-Monroe	127	11	138	62
Clinton	13	5	18	15	Park-Vermillion	10	2	12	10
Daviess-Martin	19	5	24	16	Perry	6	2	8	6
Dearborn-Ohio	23	2	25	12	Pike	1	0	1	1
Decatur	11	3	14	9	Porter	94	5	99	82
Dekalb	15	5	20	16	Posey	4	2	6	5
Delaware-Blackford	135	18	153	97	Pulaski	4	1	5	3
Dubois	32	3	35	27	Putnam	13	2	15	12
Elkhart	117	16	133	99	Randolph	10	5	15	9
Fayette-Franklin	23	2	25	13	Ripley	6	2	8	5
Floyd	53	5	58	38	Rush	9	5	14	11
Fort Wayne-Allen	370	60	430	360	St. Joseph	252	51	303	254
Fountain-Warren	9	3	12	10	Scott	6	1	7	5
Fulton	5	1	6	3	Shelby	19	4	23	18
Gibson	5	5	10	9	Spencer	2	0	2	1
Grant	74	16	90	70	Starke	8	3	11	7
Greene	11	7	18	12	Steuben	14	2	16	9
Hamilton	28	1	29	15	Sullivan	8	5	13	11
Hancock	28	2	30	20	Tippecanoe	168	25	193	156
Harrison-Crawford	8	0	8	6	Tipton	11	3	14	10
Hendricks	32	2	34	22	Vanderburgh	344	43	387	248
Henry	33	5	38	25	Vigo	124	25	149	88
Howard	80	11	91	79	Wabash	23	3	26	14
Huntington	15	5	20	7	Warrick	11	1	12	3
Indianapolis-Marion	1225	200	1425	1060	Washington	8	1	9	6
Jackson	22	5	27	18	Wayne-Union	75	12	87	67
Jennings	2	1	3	2	Wells	45	12	57	54
Jasper	10	2	12	10	White	7	2	9	6
Jay	15	3	18	12	Whitley	10	2	12	8
Jefferson-Switzerland	29	6	35	29	TOTALS:	5130	789	5,919	4,291
Johnson	39	3	42	24					
Knox	56	5	61	46	FOR INFORMATION:				
Kosciusko	22	1	23	15	1982 Totals	5066	752	5817	4404
Lagrange	9	2	11	6	1981 Totals	4942	719	5661	4482
Lake	566	67	633	480	1980 Totals	4786	707	5493	4379
Laporte	91	10	101	78	1979 Totals	4691	662	5353	4287
Lawrence	42	4	46	23	1978 Totals	4616	602	5218	4058
Madison	103	18	121	73	1977 Totals	4529	572	5101	4122

Look-Alike and Sound-Alike Drug Names

BENJAMIN TEPLITSKY, R. PH. Brooklyn, N.Y.

Look-alike and sound-alike drug names can be misinterpreted by a nurse reading doctors' orders or by a pharmacist compounding physicians' prescriptions. Such misunderstandings can result in the administration of a drug not intended by the prescriber. Awareness of such look-alike and sound-alike drug names can reduce potential errors.

DARICON

Gastrointestinal Daricon, Beecham Oxyphencyclimine MC1 Tablets

CODEINE

Category: Brand Name: Generic Name: Dosage Forms:

Category:

Brand Name:

Generic Name:

Dosage Forms:

Analgesic (many brands) Codeine

Tablets, Injection

Capsules CORDRAN

DARVON

Analgesic

Darvon, Litly

Propoxyphene MC1

Corticosteroid Cordran, Dista Flurandrenolide Ointment, Lotion, Cream, Tape

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CME QUIZ-

TO OBTAIN ONE HOUR OF CATEGORY I AMA CME CREDIT, answer the following questions by circling the correct answer on the answer sheet below. Complete and clip the application form and mail it to: Indiana University School of Medicine, CME Division, Fesler Hall 224, 1120 South Dr., Indianapolis 46223.

Acute Myocardial Infarction

CONTINUED FROM PAGES 85-89

- The major determinant of prognosis in patients hospitalized with acute myocardial infarction is:
 - a) Age of patient
 - b) Presence or absence of heart block
 - c) Size of the infarction
 - d) Presence or absence of ventricular arrhythmias
- 2. Which of the following statements about systemic vascular resistance (SVR) is not true?
 - a) SVR is characteristically increased in patients with advanced cardiac failure.
 - Sympathetic nervous system activity is a major determinant of SVR in patients with cardiac failure.
 - High levels of SVR can worsen cardiac function in some patients with heart failure.
 - d) Vasodilators to reduce SVR are most effective when the cardiac failure is associated with hypotension.

- Potential causes of sinus tachycardia in patients with acute myocardial infarction include:
 - a) Cardiac failure
 - b) Hypovolemia
 - c) Pericarditis
 - d) All of the above
- 4. Which of the following statements about hypovolemia in patients with acute myocardial infarction is true?
 - a) It should only be considered in patients who have previously received potent diuretic drugs.
 - b) It can result, in part, from a decrease in compliance of the ventricle.
 - c) The detection of normal left ventricular filling pressure (e.g. 8-12 mmHg) by Swan-Ganz catheter excludes hypovolemia as a contributor to hypotension.
- 5. Which of the following statements about vasodilators for cardiac failure due to acute myocardial infarction is true?

- a) Vasodilators should be used at the earliest sign of heart failure since they have been shown clearly to reduce mortality in this setting.
- In selected cases, vasodilators can be used in combination with sympathomimetic drugs to improve cardiac failure.
- vasodilators are most effective in improving cardiac output when the initial (pre-treatment) left ventricular filling pressure is normal rather than elevated.
- d) Vasodilators are contraindicated if mitral regurgitation is also present.
- 6. Which of the following statements about right ventricular infarction is true?
 - a) It most commonly occurs in association with anteroseptal myocardial infarction.
 - b) The patient should be treated vigorously with diuretics if the right ventricular infarction results in jugular venous distension.
 - c) It can result in hypotension that responds to fluid administration.
 - d) It characteristically results in pulmonary edema.

JANUARY CME QUIZ Answers Following are the answers to the CME quiz that appeared in the January 1984 issue: "Acute Respiratory Failure," by Mitchell L. Rhodes, M.D.

1. b 6. a
2. c 7. b
3. b 8. d
4. d 9. b
5. b 10. d

CONTINUED ON PAGE 138

Answer sheet for Quiz: (Myocardial Infarction . . .)

1. a b c d
2. a b c d
3. a b c d
4. a b c
5. a b c d
10. a b c d
10. a b c d

I wish to apply for one hour of category 1 AMA Continuing Medical Education credit through the I.U. School of Medicine. I have read the article and answered the quiz on the answer sheet above. I understand that my answer sheet will be graded confidentially, at no cost to me, and that notification of my successful completion of the quiz (80% of the questions answered correctly) will be directed to me for my application for the Physician's Recognition Award of the American Medical Association. I also understand that if I do not answer 80% of the questions correctly, I will not be advised of my score but the answers will be published in the next issue of Indiana Medicine.

Name (please print or type)

Address

Identification number (found above your name on mailing label)

Signature

To be eligible for this month's quiz, send your completed, signed applications before Mar. 10, 1984 to the address appearing at the top of this page.

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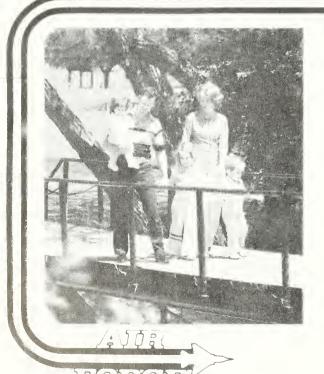
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 1 Antimicrob Agents Chemother , 8 91, 1975

 2 Antimicrob Agents Chemother , 11 470, 1977

 3 Antimicrob Agents Chemother , 11 470, 1977

 3 Antimicrob Agents Chemother , 12 584, 1978

 4 Current Chemotherapy (edited by W Siegenflader and R. Luthy). II 880 Washington, 0 C. American Society for Microbiology 1978
- 1978 Antimicrob Agents Chemother 13 861, 1978
 7 Oata on Nie Eli Lilly and Company
 8 Principles and Practice of Intelectious Diseases (edited by G. L. Mandell, R. G. Douglas, Jr. and J. E. Bennettl), p. 487. New York. John Wiley & Sons 1979



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NEWS NOTES

Medical Exhibit

"Medicine in Antebellum Indiana: Conflict, Conservatism and Change" is an Indiana Historical Society exhibit that will be on display in Indianapolis beginning March 12.

The exhibit, which covers such topics as medical practices, education, and the "professionalization" of medicine, can be viewed in the Indiana Historical Society gallery at 315 W. Ohio St., Indianapolis, until June 30. No charge for admission. For more information, call the Society at (317) 232-1877.

Indiana Court Action

A prisoner was entitled to appointed counsel and a jury trial in a claim against prison officials for alleged indifference of prison officials to his serious medical problems, a federal appellate court for Indiana has ruled.

The prisoner injured his eye and was diagnosed as having a vitreous hemorrhage in his left eye and sickle cell disease. Six months later he was referred to a hospital for treatment of his left eye. Instead, physicians performed an argon laser photocoagulation of his right eye, even though his vision was almost perfect in that eye. His vision then deteriorated and he became functionally blind in both eyes.

He filed suit against prison officials, and a trial court denied his requests for appointed counsel and a jury trial. On appeal, the appellate court said it was an abuse of discretion to deny his request for an appointed counsel. There was no compelling reason for denying his motion for a jury trial, the court said.—

Merritt v. Faulkner, 697 F.2d 761 (C.A.7, Ind., Jan. 6, 1983)

New D&A Abuse Center

Valle Vista Hospital, Greenwood, has opened a CounterPoint Center for treatment of alcohol and drug abuse. Both adults and adolescents will be cared for. Treatment will include the entire family and will include detoxification, rehabilitation and aftercare.

CME Quiz ...

CONTINUED FROM PAGE 133

- 7. Which of the following statements about myocardial oxygen consumption is true?
 - a) It is reduced by the use of inotropic drugs, even in the absence of cardiac failure.
 - b) Compensatory dilation of the ventricle in cardiac failure offers the advantage also of decreasing oxygen consumption.
 - Heart rate is an important determinant of myocardial oxygen consumption.
 - d) The systemic blood pressure affects myocardial oxygen delivery but does not affect the level of oxygen consumption.
- 8. Which of the following statements abut the use of digitalis in acute myocardial infarction is true?
 - There is general agreement that digitalis should be used in all patients with cardiac failure due to acute myocardial infarction.
 - b) During acute myocardial infarction, high doses of digitalis should be given since the patient may be less responsive to the drug and less susceptible to toxicity.
 - Digitalis can often be used to effectively treat atrial fibrillation in this setting.

- d) Digitalis is a more potent inotropic agent than dobutamine or dopamine.
- 9. Which of the following statements about the use of sympathomimetic agents to treat cardiac failure is *not* true?
 - a) The available sympathomimetic agents all increase the systemic vascular resistance, regardless of the dosage
 - Use of these drugs can lead to sinus tachycardia and ventricular arrhythmias in some patients.
 - c) Ideally, they should be used in dosages that improve cardiac function without a significant increase in SVR
 - d) Doses of dopamine that result in vasoconstriction are never indicated in patients with cardiac failure due to myocardial infarction.
- 10. Which of the following statements about rupture of the ventricular septum due to myocardial infarction is true?
 - a) It usually is not recognized clinically and does not adversely affect cardiac function to a significant degree.
 - b) It only occurs in patients with anterior infarction.
 - The diagnosis can be confirmed by measuring oxygen content of right atrial and pulmonary artery blood samples
 - d) Nitroprusside would be expected to worsen the shunt due to the VSD.

Hospital Service Charges

The average hospital charge for a private room in Indiana last year was \$170, \$13 lower than the national average; a semi-private room was \$163, \$27.50 below the national average. The figures are from a report by the Equitable Assurance Society of the United States and specify the results of a mail survey with an 83.6% reply rate from 2,517 hospitals.

For intensive care, the Indiana average per day was \$413, \$40 below the national average. In 1982 the differences were in the same direction and ran \$16, \$28 and \$64.50.

Indiana is below the median rate, with 12 states below the Hoosier state's average and the remainder close to or above the same level.

Sports Medicine Institute

Reflecting the needs and growth of athletics and sports-related agencies in Indianapolis, the newly created International Institute of Sports Science and Medicine has begun operation at the Indiana University Medical Center.

The institute, an administrative and academic unit of the I.U. School of Medicine, has a comprehensive mission which includes the support and development of education, research, and service programs in the field of sports medicine. Dr. Merrill A. Ritter, professor of orthopedic surgery at IUSM, is director of the institute.

According to Marjorie Jean Albohm, associate director, the institute has already made several grants to individuals doing research in sports medicine. These include studies on "The Mechanism for Dehydration Hyperthermia During Exercise," "Swimmer's Shoulder," "The Effect of Chronic and Acute Exercise on Immune Response in Man," and "Effects of Blood Potassium on Heart and Skeletal Muscle."

Explaining that "funding research is an important part of our purpose," Albohm, a lecturer at IUSM, said, "We invite professionals in this field to contact us concerning their research, whether it be in laboratory, clinical or epidemiological studies."

NEWS NOTES

Here and There . . .

- ... Dr. James V. Cortese of Indianapolis, one of the founders of Medico Environs, Inc., which later became University Heights Hospital, has been elected the hospital's first director emeritus.
- ... Dr. Sheldon J. Friedman of Noblesville discussed cardiovascular disease at the December meeting of the Riverview Hospital Cardiac Club.
- ... Dr. Jack C. Moore, director of the Middletown Center for Chemical Dependency, discussed chemical dependency at a December meeting of the Muncie Kiwanis Club.
- ... Dr. John W. Klemme, a Richmond cardiologist, discussed "Keeping Your Heart Healthy" during a December meeting in Richmond.
- ... Dr. Hanus Grosz, medical director of the PMS Center of Indianapolis, addressed the Indianapolis PMS Support Group during its December meeting.
- ... **Dr. Robert R. Kopecky** of Indianapolis is the new medical director at St. Francis Hospital Center.
- ... Dr. Frederick B. Stehman of Indianapolis appeared on the scientific program of the American College of Surgeons at its recent annual meeting and presented "What's New in Ob-Gyn."
- ... Dr. George A. Donnally is the new executive director of the International Academy of Proctology, which has established its new headquarters at Kendrick Memorial Hospital in Mooresville.
- ... Dr. Charles Fisch of Indianapolis is a faculty member of a $2\frac{1}{2}$ -day CME program, "Cardiac Disease and Its Therapy: The Role of Development and

- Aging," to be conducted by the American College of Cardiology in Bethesda, Md., Fcb. 29-March 2.
- Hamaker, Indianapolis, were presented the President's Award for the best scientific exhibit at the 1983 annual meeting of the American Academy of Otolaryngology-Head and Neck Surgery in Anaheim, Calif.
- Wayne has been elected board memberat-large by the American Academy of Otolaryngology-Head and Neck Surgery; Dr. J. William Wright Jr. of Indianapolis was elected to the academy's nominating committee.
- ... **Dr. David C. Brandes**, a Marion urologist, presented a paper on the implantation of penile prosthesis for impotence at a recent meeting of the north central section, American Urological Association.
- ... **Dr. Bill L. Martz** of Brownsburg has been appointed to the bequests and endowments committee, American College of Cardiology.
- ... Richard A. Buehning, a Lafayette attorney, has been chosen chairman-elect of the American Heart Association.
- ... Dr. Philip C. Ferguson has been elected chief of the medical staff, Wabash County Hospital; Dr. Charles R. Lyons is the new vice chief, and Dr. James P. McCann is secretary.
- ... Dr. Gerald C. Walthall of Indianapolis has been elected president of the medical staff, St. Francis Hospital Center; Dr. Bruce H. Bender is president-elect, and Dr. Martin T. Feeney is secretary-treasurer.
- ... Dr. Gabriel J. Rosenberg of Indianapolis has been appointed director of Pediatrics at Methodist Hospital of

Indiana. He was formerly director of Pediatric Education at the hospital, a position assumed by **Dr. Charlene E. Graves.**

\$19.6 Million for Homeless

A \$19.6 million national program aimed at helping homeless people living in up to 14 of the nation's largest cities has been announced by the Robert Wood Johnson Foundation and the Pew Memorial Trust. The program is cosponsored by the U.S. Conference of Mayors. Coalitions of health professionals and institutions, voluntary organizations, religious groups, and public agencies in the 50 most populous cities are eligible to apply.

Under the Health Care for the Homeless Program, coalitions will receive four-year grants of up to \$1.4 million each to put in place demonstration projects providing health care and assistance in obtaining access to public benefits and other services for homeless persons. The Johnson Foundation will support 10 such projects under this program and the Pew Memorial Trust will support four.

A national advisory committee, chaired by Henry Maier, mayor of Milwaukee, will help review applications, visit applicant groups during the final selection process, make grant recommendations, and help monitor the program.

The program is being administered by Philip W. Brickner, M.D., a senior program consultant of the Johnson Foundation and chairman of the Dept. of Community Medicine, St. Vincent's Hospital, New York City.

"Serious and chronic health problems are particularly troublesome among the many problems that the homeless face," Dr. Brickner said. "These range from burns and fractures to tuberculosis, untreated heart ailments and cancer, and mental illness.

"Underlying this program is the firm belief that we should not let the difficulty of the task deter us. We must try to provide basic medical services for people who, by any measure, are among the most needy in America. At the same time, meeting their health and other needs is an essential step toward helping as many as possible to regain a more satisfying and effective way of life."



Do you have a new colleague who doesn't belong to the Indiana State Medical Association? Call Mrs. Rosanna ller at (317) 925-7545 or 800-382-1721 (WATS) for a free membership kit.

Dr. Rhoads Honored

Dr. Henry B. Betts, medical director at the Rehabilitation Institute of Chicago, recently presented Reid Memorial Hospital's first Paul S. Rhoads lecture on "Humanity in Medicine."

After the lecture, Dr. Rhoads, who is retiring as Reid's director of medical education, was awarded an honorary Doctor of Humane Letters degree by the president of Earlham College, Dewitt C. Baldwin.

Dr. Betts said that Dr. Rhoads "epitomizes humanity in medicine." He warned the medical profession to stay in touch with the "virtues that people think are the motivating force of physicians." Mr. Baldwin said Dr. Rhoads showed members of the medical profession that medicine "is as much spiritual and ethical as it is technical." Dr. Rhoads, he said, displayed the "nobility of human life."

In a 1982 interview with the *Richmond Palladium Item*, Dr. Rhoads declared, "Being able to make contact with people is certainly as important as any skills and pills he (the physician) may use... Doctors need plenty of hard-nosed knowledge... But the ones that really ring the bell are the ones that can really get their feelings across to the patient."

Dr. Rhoads, 85, a long-time member of INDIANA MEDICINE's editorial board,



is a professor emeritus of medicine at Northwestern University School of Medicine, a former chief of the department of medicine at Chicago Wesley Memorial Hospital, and a former editor of Archives of Internal Medicine.

News from the AMA

• Nearly 100 medical societies are encouraging their members to provide free or reduced-fee medical care for patients who have lost health coverage because of unemployment or reductions in Medicaid and disability programs. More than 80 of these societies have set up formal programs to help victims of the recession; some have distributed a model letter that the AMA prepared for physicians to give patients. A list with a brief description of local efforts is available

from the Dept. of Health Care Coalitions, AMA headquarters.

- The public rated physicians more ethical than lawyers, business executives and members of Congress in a Gallup Poll conducted for the Wall Street Journal. 53% of the public rated the honesty and ethical standards of physicians very high or high; 35% rated them average; and 10% rated them low. Lawyers were rated very high or high by 24%; average by 43%; low by 27%. Only 18% rated business executives very high or high, 55% rated them average. and 20% rated them low. Congressmen were ranked very high or high by only 14%, while 43% ranked them average and 38% ranked them low.
- Because of a new telephone system at the AMA's Chicago headquarters, the AMA's new main number is now (312) 645-5000.
- The 1984 AMA National Leadership Conference will be held Feb. 23-25 at the Downtown Chicago Marriott.

Diabetes Research Grants

Diabetes research grants are now available from the Juvenile Diabetes Foundation for the funding year Sept. 1, 1984 to Aug. 30, 1985. Applications may be obtained from Grant Administrator, Juvenile Diabetes Foundation, 23 E. 26th St., New York, N.Y. 10010—(212) 889-7575.

- Physician Recognition Awards



The following ISMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned, and is acceptable proof in most states requiring CME in re-registration that the mandatory hours of CME have been accomplished.

Beltz, Homer F., Carmel
Bhatt, Kishor R., Boonville
Brandewie, Pilar R.N., South Bend
Cobb, Clarence M., Indianapolis
Cure, Charles W., Columbus
Das, Amal K., Kokomo
Drake, James R., Anderson
Frederick, Terry L., Carmel
Friedman, Morris S., South Bend
Gabovitch, Edward R., Indianapolis
Hastings, Hill, Indianapolis
Hathaway, William H., Auburn

Hayes, Thomas P., Evansville
Hegeman, Theodore F., Indianapolis
Himmelsbach, William A., Elkhart
Houser, William C., Evansville
Lardizabal, Jose M., Bloomfield
Mason, Lester M., Terre Haute
Meissel, Robert L., Terre Haute
Mellinger, Michael O., LaGrange
Mendelson, Stanley M., Kokomo
Nelson, Francis D., South Bend
Oei, Tjien O., Indianapolis
Pairitz, Frank D., South Bend
Priddy, Marvin E., Fort Wayne



Pyle, Susan K., Union City Rendel, Harold E., Peru Robbins, Gordon T., Zionsville Runkle Max A., Indianapolis Schaaf, Bernard J., Lafayette Shelton, N. Phillip, Vincennes Siebenmorgen, Paul T., Terre Haute Smith, Thomas D., New Haven Stolz, Thomas J., Otterbein Walker, Paul R., New Castle Wilson, Ralph S., Vincennes Zia Borhan, Manoochehr, Bedford

NEWS NOTES

New ISMA Members

The following physicians were welcomed in December as new members of the Indiana State Medical Association:

Mohammed A. Ansari, M.D., Muncie, plastic surgery

Barbara B. Bell, M.D., New Albany, emergency medicine

D. Mark Bickers, M.D., Floyds Knobs, internal medicine

Mary A. Bieker, M.D., Evansville, internal medicine

Stewart C. Brown, M.D., Muncie, l'amily practice

Thomas M. Calvin, M.D., LaPorte, internal medicine

Robert L. Christensen, M.D., Muncie, Tamily practice

Jerrold A. Clark, M.D., Evansville, pathology

Peter W. Crecelius, M.D., Muncie, l'amily practice

Edward P. Daetwyler, M.D., Evansville, otorhinolaryngology

Donald D. Davis, M.D., Muncie, neurological surgery

Joseph M. Dew, M.D., French Lick, family practice

John M. Dick, M.D., Milford, family practice

Walter J. Filipek, M.D., South Bend, internal medicine

Vidyadhar R. Gandra, M.D., Merrillville, internal medicine

Silvio A. Garcia, M.D., Indianapolis, therapeutic radiology



Roy C. Graves, M.D., New Albany, emergency medicine

Paul R. Herman, M.D., South Bend, nephrology

Gregory A. Hoffman, M.D., Fort Wayne, orthopedic surgery

Paul N. Houston, M.D., Brazil, family practice

Thomas A. Kintanar, M.D., Fort Wayne, family practice

Herbert M. Mann, M.D., Franklir, anesthesiology

Raghid Mourtada, M.D., Fort Wayne, family practice

Diane S. Musgrave, M.D., South Bend, rheumatology

Richard I. Nielsen, M.D., 1 ort Wayne, nephrology

Young Il Ro, M.D., Harvey, Illinois, neurology

David A. Rodenberg, M.D., Bedford, internal medicine

Charles E. Skidmore, M.D., Farmland, family practice

Kurt H. Stiver, M.D., South Bend, obstetrics and gynecology

Darryl M. Sugar, M.D., Evansville, internal medicine

Alvin H. Tao, M.D., Lafayette, ophthalmology

John G. Terry, M.D., Indianapolis, therapeutic radiology

Ted E. Troyer, Jr., M.D., Evansville, family practice

S. Eugene Visuth, M.D., Crown Point, anesthesiology

David B. Waterfill, M.D., Jefferson-ville, pediatrics

For the Asking . . .

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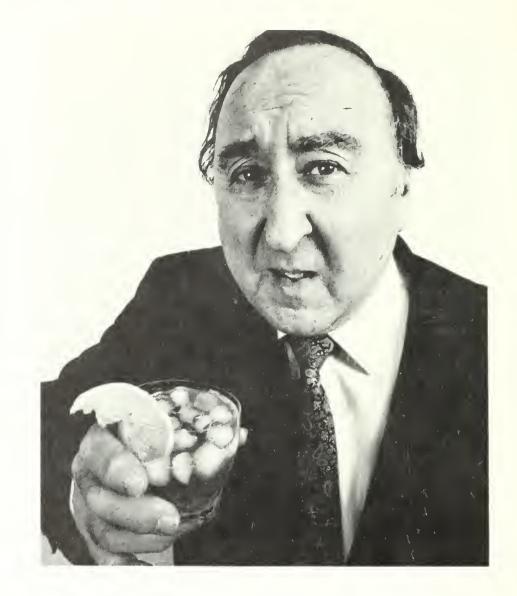
- · A revised and expanded edition of USP DI is available from the United States Pharmacopeial Convention. USP DI is a comprehensive, continuously updated reference of drug-use information for the health professional and the patient. The 1984 edition is offered by USP for \$44.95 per two-volume set. Vol. 1, "Drug Information for the Health Care Provider," sells for \$29.95. Vol. 11, "Advice for the Patient," is \$21.95. Send check or money order to USP Order Processing Dept. #224, 12601 Twinbrook Parkway, Rockville, Md. 20852. Subscriptions to the bimonthly USP DI Update, which supplements both volumes, are \$9 for one year.
- The National Fire Protection Assn. announces a new fire safety education program for the mentally handicapped. Such institutions have an unusually high incidence of fires and those who work

with the mentally handicapped require special training materials. The program, distinguished by its use of the "train and trainer" concept, includes a slide presentation on evacuation and elimination of fire hazards, an illustrated booklet to instruct the handicapped, and a trainer's manual. The address of the NFPA is Batterymarch Park, Quincy, Mass. 02269.

• The American Society of Internal Medicine has published "Computers in Internal Medicine: A Guide to Practice Evaluation and System Selection." The 123-page handbook describes what computers can do for an internal medicine practice and how to look for computer support with the most success. It covers technologies, system alternatives and practice applications (both business accounts and patient records); it also discusses how to analyze a practice to determine the need for a computer. \$16 to ASIM members, \$18 to non-members. Send check or money order to ASIM/SEREF, 1101 Vermont Ave.

N.W., Suite 500, Washington, D.C. 20005. Telephone orders are taken at (202) 289-1700.

· Two new practice management videocassette courses have been developed by the AMA. "Borrowing Money" is a 27-minute program intended to guide resident physcians through the process of seeking a loan and includes interviews with bankers. Rental price is \$25 for AMA members, \$35 for non-members; purchase price is \$250 for AMA members, \$300 for nonmembers. The second course, "Developing a Marketing Plan for Your Medical Practice," is designed to help physicians adapt to today's rapidly changing private practice environment; it features Philip Kotler, M.D., a noted marketing authority. Rental price is \$70 for AMA members, \$85 for non-members; purchase price is \$250 for AMA members, \$300 for non-inembers. To order, contact Gail Simpson at AMA headquarters, (312) 751-5961.



He Thought That Drinking Wouldn't Make Any Difference, Even Though He Was on a New Medication. But It Did.

Now he knows that alcohol and some medicines don't mix. In fact, more than half the 100 most prescribed drugs have at least one ingredient that can cause trouble if taken while drinking alcohol. The result of mixing these drugs (alcohol is a drug) may be no more than simple temporary illness, but some combinations can be dangerous, even deadly.

So, don't make a test tube out of your body. Be sure to tell your doctor or druggist about any medications you are taking and be sure to ask about the consequences of mixing a newly prescribed drug with alcohol.

Also, make it a habit to check the label carefully when you get a drug, whether it's a prescription or over-the-counter medication.

And when you get any prescription, be sure you know—

- The name of the drug
- Its purpose what conditions does it treat?
- How and when to take the drug—and when to stop taking it
- What food, drinks and other drugs to avoid while taking it
- What **side effects** may result—are they serious, short-term, long-term, etc.?

If you have any questions about your prescription, ask your doctor or pharmacist.

A message from the Food and Drug Administration. For more material about being an informed patient, write to: FDA, HFE-88, Rockville, Md. 20857.

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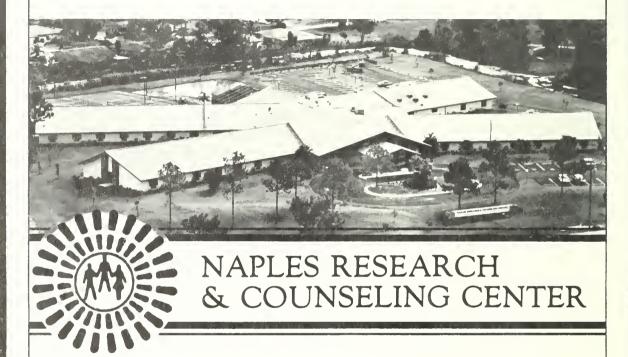
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The Foundation is managed by a board of directors that comprises the members of the ISMA Executive Committee. At present, proceeds from the Foundation investments are awarded to INDIANA MEDICINE to further the continuing medical education program.

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Elsie's Gone-But Her Memory Lives On

Elsie Reid (1909-1983)

N NOV. 22, 1931, Elsie Reid, then 22 years old, began working for the Indiana State Medical Association as a secretary. She stayed until she died Dec. 29, 1983, at the age of 74.

She came to Indianapolis from Rockville, Ind., where she was born. She was buried in Rockville on Sunday, Jan. 1, 1984.

For ISMA members and staff and her many nieces and nephews who respected and loved her, her death cast a gray cloud on the holiday season.

Everyone who knew Elsie, however, also knew that her life had been lived to the fullest. And, only a few hours before her death, she had chatted optimistically with some of the ISMA staff concerning her return to the hospital and the treatments she was to receive for a few days. As always, she asked about a staff member's children or grand-children. She had an unconquerable spirit that showed in her speech, her dress, her manner and her interests.

Elsie's fine qualities, and the blessing of a quiet and peaceful death, lifted somewhat the gloomy spirits of those who cared for her.

ISMA members who knew Elsie, and there were thousands of them over the years, all recognized her value to the Association and her commitment to them.



She was honored by the House of Delegates in 1981 by being inducted as an honorary member of the Association, as an honorary member of the ISMA Fifty Year Club and as an honorary ISMA past president.

Elsie Reid could tell you stories about the ISMA and its members that you might find in dusty volumes of The Journal or in microfilm versions of Indiana newspapers from yesteryear. The byword was to "Ask Elsie" if a question needed to be answered about any ISMA historical matter.

Elsie did a little of everything during her five decades with the ISMA. She initiated or maintained many of the old files at the headquarters, and remembered most of them. She was in charge of Membership Services for 36 years; until 1977, she also served as secretary to the executive director—in fact, all four executive directors since the position was established in 1924. Since 1968, she worked with the Grievance Committee and the Commission on Convention Arrangements.

When Elsie joined the ISMA, only three other people comprised the entire administrative staff; the headquarters was then located in the Hume-Mansur Building in downtown Indianapolis. Since 1932, she attended every annual convention except the one held in 1982, which she missed due to illness. Even then, staff members kept her posted.

As a headquarters receptionist for many years, she was an expert at handling even the most unusual inquiries from the public.

During the past two years, Elsie worked part-time, assisting in convention planning and doing other needed chores around ISMA. She loved the ISMA, the building, the doctors, the staff and life. She left an unforgettable imprint on their lives and they will not forget Elsie Reid.

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February 1984

OBITUARIES.

Emmett B. Lamb, M.D.

Dr. Lamb, 83, a retired Indianapolis surgeon, died Dec. 23 at Winona Memorial Hospital.

He was a 1931 graduate of Indiana University School of Medicine.

Dr. Lamb, medical director of P.R. Mallory Co. for many years, retired in 1979. He was medical director at International Harvester Co. from 1937 to 1965. He was chairman of the state Commission on Public Health and served on the Indiana Council of Nursing Homes.

He was a member of the American and International College of Surgeons, the Industrial Medical Association, the American Society of Abdominal Surgeons, and the ISMA Fifty Year Club.

Antone C. Remich, M.D.

Dr. Remich, 7I, a Hammond orthopedic surgeon, died Nov. 28 at St. Margaret Hospital, Hammond.

He was a 1938 graduate of Loyola University Stritch School of Medicine and was a veteran of World War II.

Dr. Remich was president of the Hammond Board of Health for 10 years and was a past president of St. Margaret Hospital. He was a member of the American College of Surgeons and the Industrial Medical Association.

William H. Garner, M.D.

Dr. Garner, 89, a retired New Albany surgeon, died Nov. 21 at Floyd Memorial Hospital.

He was a 1923 graduate of the University of Louisville Medical School and was an Army veteran of World Wars 1 and 11.

Dr. Garner, a former ISMA trustee (1938-43 and 1948-55), retired in 1977. He was a founder and former trustee of Floyd Memorial Hospital. He was a member of the ISMA Fifty Year Club, a former president of the Floyd County Medical Society, and a fellow of the American College of Surgeons.

Lloyd H. Smith, M.D.

Dr. Smith, 52, a former North Manchester physician, died Dec. 2 at the Memorial Medical Center, Ludington, Mich.

He was a 1957 graduate of Indiana University School of Medicine.

Dr. Smith was a former president of the Wabash County Medical Society and had once served as an ISMA delegate. He moved to Illinois in 1975. While practicing in North Manchester, he helped start a four-county mental health center in Warsaw, now the Bowen Center for Human Services. He was a member of the American Academy of Family Physicians.

Memorials: Indiana Medical Foundation

The Indiana Medical Foundation, Inc. was formed by the Indiana State Medical Association "for religious, charitable, scientific, literary or educational purposes." It provides financial assistance to support the educational mission of Indiana Medicine.

Contributions made to the Foundation are deductible by donors in accordance with the Internal Revenue Code. Gifts are deductible for Federal estate and gift tax purposes.

The Foundation is pleased to acknowledge the receipt of gifts in remembrance of the following individuals:

Sam W. Litzenberger, M.D. Eli Goodman, M.D. Wemple Dodds, M.D. James J. Stewart, Esq. Guy A. Owsley, M.D. Charles A. Everett, D.D.S. Eugene S. Rifner, M.D. Elsie A. Reid

Louis T. Need, M.D.

Dr. Need, 77, a retired Indianapolis general practitioner, died Dec. 7 at the Greenwood Convalescent Center.

He was a 1930 graduate of Indiana University School of Medicine and was a Navy veteran of World War II.

Dr. Need, who retired in 1981, was a member of the ISMA Fifty Year Club.

Sam I. Rotman, M.D.

Dr. Rotman, 77, a Jasonville physician serving as president of the Greene County Board of Health, died Dec. 17 at his home.

He was a 1931 graduate of Indiana University School of Medicine.

Dr. Rotman, a former ISMA delegate representing the Greene County Medical Society, was a member of the American Academy of Family Physicians and the ISMA Fifty Year Club.

Francis W. Porro, M.D.

Dr. Porro, 82, a retired Evansville pathologist, died Nov. 24 at his home.

He was a 1929 graduate of Rush Medical College and was an Army veteran of World War 11.

Dr. Porro was chief pathologist at St. Mary's Medical Center from 1949 to 1972. In 1972 the pathology facilities at St. Mary's were built and named in his honor. He was a member of the ISMA Fifty Year Club, the College of American Pathologists and the American Society of Clinical Pathologists.

Joseph D. Imhof, M.D.

Dr. Imhof, 72, a Muncie radiologist, died Dec. 16 at his Muncie home.

He was a 1936 graduate of Temple University School of Medicine, Philadelphia.

Dr. Imhof was a diplomate of the American Board of Radiology and was a member of the American College of Radiology and the Radiological Society of North America.

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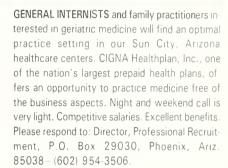
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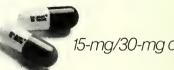
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VOL.77

NO.3

INDIANA MEDICINE

The Journal of the Indiana State Medical Association

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THE EARLY YEARS OF X-RAY
See 'Medical Museum Notes'

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ABOUT THE COVER



Our cover shows an x-ray procedure being conducted at the Robert Long Hospital, Indianapolis, in 1916. Although the individuals are unidentified, the gentleman at right appears to be Edwin Kime, at that time a candidate for the M.D. cum laude degree and an externe at the Long Hospital. Can anyone identify the gentleman in the lead apron? For more about early x-rays, see "Medical Museum Notes."

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The Indiana Historical Society

What's in a Name?

HE INDIANA HISTORICAL SOCIETY was organized Dec. 11, 1830 at a meeting of citizens convened in the Marion County Court House in Indianapolis. Its principal founder was John Farnham (1791-1833) of Salem, Ind. The initial purposes of the organization were stated to be "the collection of all materials calculated to shed light on the natural, civil, and political history of Indiana, the promotion of useful knowledge, and the friendly intercourse of such citizens of the State as are disposed to promote the aforesaid objectives." Chartered by an Act of the General Assembly Jan. 10, 1831, the Indiana Historical Society is a private corporation with a public responsibility. The founders' objectives continue to guide the society today.

Although Farnham's role with the society was very brief, he and his colleagues laid a very sound foundation. A cholera epidemic carried away 10% of Salem's population in the summer of 1833, including John Farnham and his wife and child. (Farnham had been assisting his brother-in-law, Dr. Charles Hay, in caring for cholera victims.)

The society maintains a library, which is a repository of rare books, manuscripts, maps, pictures, and ephemera relating to the history of Indiana and the history of the Old Northwest. Included in this collection are rare medical books, account books, and other items relating to Indiana medical history. The library is making a concerted effort to develop this long neglected area of the state's history.

The society promotes useful knowledge through its publication program. Since 1886 it has issued a wide variety of monographs and other publications. Two or three books or monographs are published each year, which cover a wide variety of subjects. Last year, for example, these included *Indiana Ragtime*—a collection of records and a booklet describing this aspect of the state's musical history.

The Medical History Committee publishes the Medical History Quarterly; the Medical History Section publishes the Medical History Journal; the Archaeological Committee publishes the Prehistory Research Series; and the Family History Section publishes a number of genealogical journals, in-

cluding Hoosier Genealogist and Genealogy.

The Indiana Historical Society presents the Indiana History Conference in November each year, in conjunction with the society's annual meeting; and in addition to this, spring and fall conferences are held annually at locations throughout the state. These programs are open to all who are interested in Indiana's historical heritage.

Among the numerous Indiana physicians who have been members of the Indiana Historical Society over the years, the most significant has been Dr. Frank Wynn (president of ISMA, 1914-1915). Dr. Wynn, who was the founder of the Annual Scientific Session of the AMA, and the principal catalyst in uniting the state's proprietary medical schools into Indiana University School of Medicine, was president of the Indiana Historical Commission, established to celebrate the state's Centennial in 1916. The various programs sponsored by this group sparked a general interest in the state's history, which persists to the present.

The society has never been the recipient of state funds. It is entirely self-supporting. This has been possible through the generosity of a number of its member benefactors over the years. The most significant in this regard was Mr. Eli Lilly, whose 1977 bequest, valued at approximately \$20 million, has enabled the society to expand its programs remarkably. In terms of Indiana medical history, this has included the initiation and development of an Indiana Medical History section in the society's library, the co-sponsoring (with Indiana University) of a chair for medical history (Ann Carmichael, M.D., Ph.D.), and a co-sponsoring (with the Indiana Medical History Society) of an Indiana medical historian and museum curator (Kathy McDonell, M.A.).

Indiana physicians are encouraged to become members of the Indiana Historical Society. Annual memberships are \$15 (which is considerably less than the value of the publications the member receives during the course of the year).

The address is: Indiana Historical Society, 315 W. Ohio St., Indianapolis, Ind. 46202.

MEDICAL MUSEUM NOTES



CHARLES A. BONSETT, M.D., Indianapolis

N SPEAKING to a radiology group in December I had occasion to look into the early history of x-ray and its uses in Indiana. It proved to be a pleasant and surprising experience. It turns out that the question as to who first performed x-ray or where x-ray was first performed in the state needs to be qualified. Do we mean who first operated an x-ray apparatus, or which person or institution can first be said to have offered a professional service in this area? It makes a difference.

I had always assumed that Norways Sanitarium in Indianapolis was the first, since this diagnostic aid had apparently been used from the time of the hospital's origin in 1898. Roentgen's studies, however, were done in the winter of 1895, and his publication appeared in the spring of 1896. Inasmuch as this discovery was so spectacular, it was immediately publicized around the world, and x-rays were soon being generated in many areas, including Indiana.

At that time there were two different methods of achieving the very high voltages necessary to obtain x-rays—the induction coil and the static machine. During the 1880s the art of electrotherapeutics had developed, and extravagant claims and, in some instances. peculiar treatments were advocated for the technique. The reason for mentioning this is not to get involved with electrotherapeutics, but rather to point out that enormous Wimhurst machines and other types of high voltage static devices were readily available from medical and surgical supply houses by 1895, and were even then to be found in the offices of many physicians. All that was necessary to get into the x-ray business for such physicians was to obtain a Crookes tube, and to devise a fluoroscope. The dangers associated with this practice were not immediately appreciated, but it didn't take long for these to become known. Indiana soon had its share of x-ray martyrs.

The first physician in the state to have used the x-ray, so far as I have yet determined, was Frank E. Wiedemann, M.D. of Terre Haute. In 1896, using a Ruhmkorff coil and a Crookes tube, he

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demonstrated that the image of a key concealed by a book could be illustrated fluoroscopically. The fact that he lived to be 89 years old (1962) suggests that he had the good sense to occupy his time thereafter with other pursuits.

The first professional announcement of x-ray service in Indiana is found on page 195 of the Indiana Medical Journal (1897), which informs physicians of the Indiana Cathescope Company, located in the Lombard Building at 24-1/2 East Washington Street, Indianapolis. This announcement is not presented in the form of an ad, but rather as a general piece of information indicating that the company is soliciting patient referrals. The article mentions that the instruments used include Hammerschlag's cathescope and Edison's fluoroscope. There is no physician's or other personal name associated with this announcement.

The first professional ad for x-ray is found in the JISMA vol. II, 1909 Advertisements Page xv, that of Dr. Albert M. Cole. His obituary (JISMA vol. 21, page 308, 1928) indicates that he was an 1894 graduate of the Medical College of Indiana, and a pioneer in the development of roentgenology in Indiana.

This surprising ad struck close to home. Back in the summer of 1935, as a boy of 14, I got the job of cleaning the attic of the home of Dr. Cole's widow. I found stacks of old newspapers telling of the sinking of the Titanic and other interesting events. This naturally

slowed the progress of cleaning the attic. Mrs. Cole allowed me to keep these papers. After clearing away other items, I discovered an induction coil, an x-ray tube, and a fluoroscope. I was fascinated with these. I requested these items also, and was told that I could have the coil, but not the x-ray tube or the fluoroscope. At the time I didn't appreciate her wisdom. I then found a box of bones, and from these inquired if I could have the skull. "Why do you want it?" she asked. My imagination and enthusiasm weren't contagious. I envisoned building a radio in it, with a small speaker in the calvarium, red reflectors in the orbits, and the tuning capacitor attached to the movable jaw. She was unimpressed, but very considerate and polite in telling me that it wasn't meant for that type of use. She was still living in 1949, when I was a freshman in medical school, engrossed with the subject of anatomy and osteology. I again approached her, this time not for the skull alone, but for the entire box of bones, and for a different purpose. This time she seemed very pleased to part with

More years have passed since that day in the attic to the present than transpired between that date back to Roentgen's discovery in 1895. How I wish I could approach Mrs. Cole again for the x-ray tube and fluoroscope, this time for the Museum. That opportunity, however, has long since passed.

WHAT'S NEW?

A portable neuromuscular stimulation system with the first electrodes specifically designed for muscle stimulation has been introduced by the 3M Company. The Myocare Dual Channel Neuromuscular Stimulator Kit (No. 6080) is designed for versatility and convenience.

Abbott Laboratories announces approval by the FDA for marketing Abbokinase for direct infusion into a blocked coronary artery to dissolve clots and restore blood flow. Clot solution is possible in the majority of patients for whom the diagnosis is made within six hours of the onset. "Abbokinase" is the Abbott purified form of urokinase. It has been marketed since 1978 for dissolving clots in the lung. Because it is a naturally occurring substance in humans, consideration for its use does not include patient resistance or allergic reaction.

Midmark Corporation is introducing a new full power examination table, identified as Power 119 Clinical Examination Table. The Crescent of Power foot control controls positions of the back, foot and chair sections into all popular positions including Trendelenburg. Elderly, obese and infirm patients can get on and off the table as well as into and out of the chair position easily.

Nippon Syntex K.K. and Tanabe Seiyaku Company will extend development and market a major new anti-ulcer prescription drug in Japan. Enprostil, a prostaglandin analog, is a product of research by Syntex, U.S.A. It has been shown to reduce stomach acid, increase the resistance of stomach tissue to acids and reduce serum gastrin.

Hewlett-Packard has a new family of compact, microprocessor-based neonatal monitors, the HP 78831A, 78832A and 78833A. They are specifically designed to manage the full spectrum of neonatal-care applications. The precise automatic-trigger algorithm in this family enables the user to monitor the patient without readjusting the respiration channel. A battery option is available if transport of the neonates is necessary and it is important to preserve the trend information and vital monitoring time.

Key Pharmaceuticals has received FDA approval for marketing Thco-Dur with recommendation for once-a-day dosage. Theo-Dur is the first oral sustained action anhydrous theophylline product with zero-order release kinetics. The majority of patients will fare better on the standard twice-a-day dosage but certain selected asthma patients will be well served by the new schedule.

Abbott Laboratories announces a sensitive, objective enzyme immunoassay (EIA) for the detection of antibodies to cytomegalovirus. The test, Abbott CMV Total AB EIA, is fast, accurate and may be used with serum, plasma or whole blood samples. Results obtained in three hours.

Abbott Laboratories announces a rapid, quantitative enzyme immunoassay (ElA) for measurement of lgE in human serum or plasma. It is solid phase EIA. Uses essentially the same procedure and accessories as other Abbott ElAs. Five standards are used to generate a standard curve. Results are in international units per milliliter. An optional control also is provided with the kit.

William Morrow and Company has published Putting the One Minute Manager to Work. It is a sequel to The One Minute Manager, written by the same authors. It has been a best seller for three years and appears in 16 languages. Ken Blanchard and Robert Lorber, in both books, have introduced a management technique that is creating rave notices. One reviewer predicts the latest book will be "the cabbage patch book of the publishing industry for 1984." Another reviewer says: "If you can only read two books this year, read this one twice!"

News of what is new in the medical supply industry is composed of abstracts from news releases by book publishers and manufacturers of pharmaceuticals, clinical laboratory supplies, instruments and surgical appliances. Each item is published as news and does not necessarily constitute an endorsement of a product or recommendation for its use by INDIANA MEDICINE or by the Indiana State Medical Association.

Reneau announces a breakthrough in hyperbarics. The Reneau Unit Dual-Compartment Hyperbaric Chamber is the first mobile dual-compartment chamber. This includes a patient chamber as well as a separate attendant chamber, allowing immediate access to the pressurized patient. The unit utilizes a nitrogen pressurization system that provides hyperbaric oxygen therapy while simultaneously maintaining an oxygenreduced atmosphere in the chamber. This lessens the danger of fire. The unit has an easy-to-operate door which is virtually impossible to open when the chamber is pressurized, many viewports and optional x-ray ports, large roomy inside dimensions and redundant safety systems.

Sequoia-Turner has introduced a new ion-selective electrode potassium analyzer. The Dyna-Lyte 100 K Analyzer is ideal for a variety of applications, including the doctor's office, clinical lab, intensive care, veterinary offices and others. Solid-state, ion-selective electrodes measure Potassium in less than 30 seconds.

Abbott Laboratories announces the introduction of Corzyme-M, the first enzyme immunoassy (EIA) in the United States for detection of IgM antibody to hepatitis B core antigen (anti-HBc IgM). Corzyme-M will confirm acute hepatitis B infection early in the disease. Recommended in differentiating acute hepatitis B from non-A, non-B hepatitis and other hepatic viral infections.

Eastman Kodak Company has issued a brochure entitled "Screen/Film Mammography." Included in the discussion are quotes from physicians and medical societies as to efficacy of the procedure. Also, the question of radiation risk versus the early detection rewards is discussed. The fact that, while both mammography and xeroradiography produce acceptable images, mammography exposes the patient to substantially less ionizing radiation, is part of the discussion.

CONTINUED ON PAGE 195

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FUTURE FILE

Hemorrhagic Problems

"Hemorrhagic Complications of Disease" is the title of a CME course sponsored by the University of Wisconsin for physicians, nurses and technologists. The course meets in Madison on May 31 and June 1. AMA Category 1 credit is 12 hours.

Contact Sarah Z. Aslakson, 465b WARF Bldg., 610 Walnut St., Madison, Wisc. 53705—(608) 263-2856.

Common Ear Disorders

"An Update of Treatment for Common Ear Disorders" will be presented Wednesday, March 21, at the Marten House, 1801 W. 86th St., Indianapolis.

The review, sponsored by the Indiana Academy of Family Physicians, is accredited by the American Academy of Family Physicians and by the American Academy of Pediatrics for seven prescribed CME hours.

For information, contact Jerry L. House, M.D., 9102 N. Meridian St., Suite 525, Indianapolis 46260—(317) 848-9505.

PPO Experiences

Robert Gregg, M.D. of California will discuss his experiences with PPO in his home state and his confrontation with Dr. Ed Zalta and ensuing litigation, at the spring meeting of the Indiana Chapter, Association of American Physicians and Surgeons, Saturday, April 14, at Laughner's Cafeteria, U.S. 31 South, Indianapolis.

(The September 1983 issue of *Medical Economics* featured an account of PPO and Zalta v. Gregg on page 86. Dr. Zalta was a speaker at the 1983 ISMA convention.) Kent Brown, a Lexington, Ky. attorney, will be present to discuss the legal ramifications of PPOs as they relate to the private practitioner.

The business meeting will begin at 3 p.m., followed by dinner at 5 p.m. and then the principal address by Dr. Gregg. All physicians and spouses are welcome and urged to attend.

For more information, contact Robert Rudesill, M.D. at (317) 926-3939, or Helen B. Barnes, M.D. at (317) 881-3796.

Minhas Lectureship

The 5th annual Kareem B. Minhas Memorial Lectureship will be held Tuesday, April 17, at 6 p.m. at Kosair-Children's Hospital, Louisville, Ky. The lecturer will be Samuel Kaplan, M.D., professor of pediatrics and medicine, University of Cincinnati. The lecture, sponsored by the University of Louisville, is accredited for one Category I hour.

Contact Debbie James, Dept. of Pediatrics-Cardiology, Kosair-Children's Hospital, (502) 562-8816.

Professional Relationships

Physician-nurse-administration professional relationships and how they affect patient care will be the topic of a conference called "In Search of Patience," to be conducted June 15-16 at the Indianapolis Hyatt Regency.

The meeting is sponsored by the Indiana Hospital Association and the Indiana Society for Hospital Nursing Service Administration. The Saturday morning program will be devoted to a panel discussion on the professional relationships—why they work and why they don't, and what can be done to ensure optimal care.

For advance registration information and materials, contact Lu Cohen, 1HA, 3921 N. Meridian St., 1ndianapolis 46208—(317) 926-1395.

Emergency Medicine

The 13th annual "Indianapolis 500" Postgraduate Course in Emergency Medicine will be conducted May 9 to 11 in Indianapolis. The sponsor is the Indiana Chapter of ACEP. The course carries 22 hours of Category 1 credit.

Write or phone Nick Kestner, 914 South Range Line Road, Carmel, Ind. 46032—(317) 846-2977.

The Journal of the American Medical Association publishes a list of CME courses for the United States twice yearly. The January listing features courses offered from March through August; the July listing features courses offered from September through February.

Cardiac Rehabilitation

"Cardiac Rehabilitation" is the subject of the 7th annual symposium sponsored by the University of Wisconsin, May 1 to 4. The place is the Red Carpet Hotel, Milwaukee. The program is oriented to physicians, nurses, therapists and allied health professionals. Credit for AMA Category 1 is 23 hours for the symposium and 4 hours for the preliminary session.

Contact Sarah Z. Aslakson, 465B WARF Bldg., 610 Walnut St., Madison, Wisc. 53705—(608) 263-2856.

Emergency Care

"Common Emergency Care Problems" is the subject of a CME program at the Sheraton Hotel, Madison, Wisc., July 19 to 20. Credit for AMA Category 1; American College of Emergency Physicians and Family Practice credit applied for.

Contact Sarah Aslakson, 465B WARF Bldg., 610 Walnut St., Madison, Wisc. 53705—(608) 263-2856.

Thoracic Society Program

The Indiana Thoracic Society, medical section of the American Lung Association of Indiana, will sponsor a continuing medical education program April 12 and 13 at the Downtown Hilton, Indianapolis.

The program will include sessions on the etiology of asthma, allergies and immunotherapy, exercise, bronchial provocation testing, spirometry and peak flow monitoring, emergency assessment, and therapy. Workshops will be offered on the delivery of aerosol medication and performing spirometry in the physician's office. Featured speakers for the meeting will be Dr. Miles Weinberger, head of pediatric pulmonology at the University of Iowa Hospitals, and Dr. M. Henry Williams, director of the pulmonary division at Albert Einstein College of Medicine in New York. Registration fee is \$30.

For more information, contact Dennis Alexander, Indiana Thoracic Society, 30 E. Georgia St., Indianapolis 46204—(317) 632-3383.

CONTINUED ON PAGE 226

"We believe the malpractice picture CAN change—if we first help each other understand the problems and then tighten our controls."

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RONALD G. BLANKENBAKER, M.D. State Health Commissioner

New information from Office of the Commissioner Indiana State Board of Health 1330 W. Michigan St. Indianapolis, Ind. 46206 317-633-8400

PUBLIC HEALTH NOTES.

The sexually transmitted diseases (STD's) of major importance in terms of public health significance in Indiana today are gonorrhea, Chlamydial infection and syphilis. Things haven't changed much in the past several years except federal funding cuts in venereal disease control. There were 16,060 cases of gonorrhea reported in 1982, and it is believed that only a quarter of the cases are reported by physicians. In the same vear there were 186 cases of primary and secondary syphilis reported. Even though not reportable at this time, large STD clinics find nongonococcal urethritis as prevalent as gonococcal infection in males. The age group with the highest reported case rates for these common STD's remains the 20-24 year olds.

Why are we still plagued with these age-old diseases when rapid laboratory testing supplements clinical findings and an individual can be adequately treated before leaving an office or clinic? Two issues come to mind. First is the fact that without thorough epidemiology, these common STD's cannot be controlled. Disease control is based on the strong foundation of shoe leather epidemiology which still proves to be effective despite the limited resources of the past decade. Gonorrhea screening, experimental Chlamydial screening programs, and early diagnosis and treatment are only the "tip of the iceberg" in STD control. Identification and prophylactic treatment of all sexual partners (emphasis on all) is the key to reducing the reservoir of disease in the community. Only in this way will complications and sequelae of diseases, such as pelvic inflammatory disease, be reduced.

The second issue which comes to mind is the fact that the medical community is hungry for the latest information on herpes and Acquired Immune Deficiency Syndrome (AIDS), yet the responsibility for venereal disease control is overlooked. To date, 12 cases of AIDS have been identified and investigated in Indiana. While not yet a reportable disease, STD

Controlling Sexually Transmitted Diseases Requires Cooperative Action . . .

clinics report seeing only one case of herpes for every nine cases of gonorrhea. Doctors don't want to hear about gonorrhea or pelvic inflammatory disease—it's "old hat." Sexually transmitted vaginitis caused by yeast, trichomonas, and Gardnerella organisms is the chief complaint of one-third of all women attending STD clinics. Certainly, lack of knowledge is not the reason that these common STD's continue to be a problem; perhaps it is a lack of action.

What do you think would happen if the public and private sector joined forces to work on this epidemic on the same magnitude as the measles outbreak of 1983? The pertussis outbreak of 1980, the outbreak of Legionnaires disease of 1978, and the St. Louis encephalitis outbreak of 1975 are prime examples of how motivated health professionals have controlled disease. If we all went after gonorrhea with the same fervor, it would almost be eliminated from Indiana in a matter of months. In the state there are 13 STD clinics based in local health departments. Filling the gap in community services are family planning clinics that are willing to treat infected patients as well as male consorts. The Communicable Disease Control Division is working closely with county-based STD clinics and the Centers for Disease Control to provide quality training in the clinical, laboratory, and epidemiological aspects of STD control to any individual in the public or private sector who is involved in STD control.

What actions can be taken to control the common STD's? First, the "1982 Sexually Transmitted Diseases Treatment Guidelines" should be used. The Guidelines were published by the Centers for Disease Control and excerpts were included in recent issues of the "Indiana Epidemiology Report." Low cost treatment facilities should be identified for patients and sexual partners in your communities. Suggestions include health department or community neighborhood health centers. Second, when reporting morbidity to the Indiana State Board of Health, Communicable Disease Control Division, ask for assistance from the public health investigator in your area for confidential disease investigation. Report penicillin-resistant organisms by telephone immediately to the Indiana State Board of Health, and inform the Indiana State Board of Health of gonococcal pelvic inflammatory disease on the confidential venereal disease report card. These disease reports receive priority investigation because of "high risk" and special outbreak control measures.

Common STD's are affecting thousands of Indiana citizens each year. Each case is a community and public health problem beyond the private physician-patient relationship because of complications to the individual as well as transmission to others in the community. Cooperative action on the part of private physicians and public health agencies is essential to control these common STD's. It is apparent that we have identified the problem and we know how to affect it. Now let's move into action to control the epidemic of common sexually transmitted diseases.

Please refer to a more technical article on PID in the scientific section of this issue, and for further information on these topics please contact the Communicable Disease Control Division of the Indiana State Board of Health at 1330 W. Michigan St., Indianapolis, 317/633-8422.

A NEWSLETTER OF INDIANA MEDICAL HISTORY

Exhibit on Early Medicine Opens at Society

An exhibit entitled "Medicine in Antebellum Indiana: Conflict, Conservatism, and Change" will be on display at the Indiana Historical Society from March 12 through June 30, 1984. Sponsored by the Indiana Historical Society's Medical History Committee, the Indiana Historical Society Library, and the Indiana Medical History Museum, the exhibit focuses on health and medicine in Indiana prior to the Civil War. Early nineteenth-century Hoosiers faced a wide variety of diseases, of which the most dramatic were malaria, smallpox, cholera, and milk sickness. Unfortunately, medical science was unable to offer much help to the ailing pioneer. In this age before anesthesia, the germ theory, and bacteriology, there were many conflicting theories of disease, as well as conflicting therapies. The orthodox, or medical school-trained, physicians emphasized the use of bloodletting and harsh drugs. Many patients resisted these treatments and turned to their own home remedies. Other patients relied on milder treatments offered by medical sects such as the Thomsonians or homeopaths. Still others found a refuge in the bottled panaceas, or patent medicines, which claimed to cure anything from the common cold to cholera.

During the 1820s and 1830s, medical research emanating from Paris proved the ineffectiveness of many of the caustic, "heroic" cures traditionally employed by orthodox physicians. This research, combined with the opposition to the practices of bloodletting and harsh drugs which had arisen among the lay public during the first half of the nineteenth century, caused many Indiana physicians to reexamine their beliefs. Despite these new findings, however, some physicians stubbornly resisted change and continued bleeding and purging beyond the antebellum period. Yet, this conservatism eventually gave way to a change in medicine. With the growth of hospitals in the United States came medical research; and with the development of local and state medical societies, as well



Photo by Seth Rossman

The unid-ninetecuth century scarificators and cupping glasses shown above were used to perform bloodletting, a commonly employed therapy during the antebellion period.

as medical journals, came new methods of disseminating information. This new "institutionalization" of medicine eventually replaced heroic medicine and home remedies in Indiana.

Utilizing medical artifacts, books, and prints from the collections of the Indiana Medical History Museum and the Indiana Historical Society, this exhibit will depict the development of medicine in Indiana during the first half of the nineteenth century. A catalog will accompany the exhibit and will be free to all of those who currently receive publications of the Medical History Committee of

Society Receives Rare Medical Works

The Indiana Historical Society Library recently received an important collection of books, pamphlets, and manuscripts from Dr. and Mrs. Bernard D. Rosenak of Indianapolis. Dr. Rosenak is a member of the Society's Medical History Committee and is on the board of directors of the Indiana Medical History Museum.

The collection donated by the Rosenaks originally belonged to Mrs. Rosenak's father, Edgar F. Kiser, M.D. (1880-1958). Kiser was a cardiologist, teacher, medical historian, and avid book collector. He was a 1903 graduate of the Medical College of Indiana (which in 1904-1905 became a part of the Indiana University School of Medicine). After World War I, Kiser had a private practice in cardiology in Indianapolis and was the first local physician to install an electrocardiograph machine in a private office. He was also a professor of clinical medicine at Indiana University and in 1932 was given the additional duty of teaching the history of medicine. During his lifetime Dr. Kiser amassed a large collection of rare medical works, one of the rarest being Speculum Matrices, a seventeenth-century midwifery text by James Wolveridge. Kiser's was one of only four known copies in the world. This extremely rare work, along with the major portion of Kiser's collection, was donated to the Lilly Library in Bloomington several years ago.

The Rosenaks, however, received the remainder of Dr. Kiser's collection and have generously offered it to the Society's growing collection on nineteenth-century medicine. Among the more interesting works included are titles by Oliver Wendell Holmes (1809-1894), an American author and physician who determined the contagious nature of child-bed or puerperal fever; Benjamin Rush (1746-1813), a noted Philadelphia physician and political reformer often referred to as the "father of psychiatry"; Harvey Cushing (1869-1939), an American surgeon and one of the founders of neurosurgery, who developed several universally accepted techniques for removing brain tumors; and Ivan Petrovich Pavlov (1849-1936), a physiologist noted for his studies of digestion and conditioned reflexes. Also included in this collection are letters to Dr. Kiser from such noted medical historians

Snakeroot Extract is a joint publication of the Indiana Historical Society's Medical History Committee (315 West Ohio Street, Indianapolis, Indiana 46202) and the Indiana Medical History Museum (Old Pathology Building, 3000 West Washington Street, Indianapolis, Indiana 46222). The newsletter is mailed to members of both the committee and the museum.

Charles A. Bonsett, M.D., *Editor*Ann G. Carmichael, M.D., Ph.D., *Asst. Editor*Katherine Mandusic McDonell, *Managing Editor*Submit all items for publication in the newsletter and inquiries about membership information to the Managing Editor, c/o Indiana Historical Society, 315 West Ohio Street, Indianapolis, Indiana 46202.



Photo by Seth Rossman

Shown above is the late Edgar F Kiser, M.D. Part of Dr. Kiser's rare medical book collection was recently donated to the Indiana Historical Society Library.

as Henry Sigerest and H. Fielding Garrison; an 1841 lecture notebook of Jonathon Schrack, Jr., a student at the Jefferson Medical College in Philadelphia; and a receipt signed by the noted Philadelphia surgeon, Philip Syng Physick (1768-1837).

Dr. and Mrs. Rosenak also donated an autographed photograph of the Austrian surgeon Theodore Billroth (1829-1894) to the Indiana Medical History Museum. Dr. Billroth was the founder of gastric surgery.

Museum Undertakes Fund-Raising Campaign

The Indiana Medical History Museum has recently undertaken a fund-raising campaign. The museum is housed in the Old Pathology Building on the grounds of Central State Hospital in Indianapolis. Chairing the committee for the fund-raising drive are Edmund L. Van Buskirk, M.D., of Lafayette, and Dennis S. Megenhardt, M.D., of Indianapolis. Interest in preserving the Old Pathology Building and the museum's collections was aroused when the Indiana University School of Medicine Class of 1933 held its fiftieth-year reunion in the Old Pathology Building. Those attending were very impressed with the efforts made thus far to preserve Indiana's medical history and want to insure the museum's success.

The museum's operating fund presently comes from the interest from a recently acquired endowment and from dues paid by physicians belonging to the Indiana State Medical Association. The museum, however, needs more funding to open on a regular basis and provide the

(Continued on Page 3)

Exhibit on Early Medicine

(Continued from page 1)

the Indiana Historical Society. A limited number of copies will be available for purchase through the Indiana Historical Society.

The Indiana Historical Society is located on the third floor of the Indiana State Library Building on the southwest corner of North Senate Avenue and West Ohio Street. The entrance is on Ohio Street. It is open Monday through Friday, 8:30 a.m. to 4 p.m., and Saturday, 8:30 a.m. to 4 p.m., except for the following dates when the Society will be closed: Good Friday and the following Saturday (April 20 and 21), Memorial Day (May 26 and May 28), Spring workshop weekend (Saturday, May 12), and all Saturdays in June.



Photo by Seth Rossman

Shown above are a pair of mid-nineteenth-century doctor's saddlebags. During the antebellum period, the physician traveled on borseback to bis patients. Thus, often the doctor's most valuable possession was his saddlebags.

Committee Introduces New Logo

The new newsletter of the Medical History Committee, Snakeroot Extract, derives its name from the white snakeroot plant, a plant that is significant in Indiana medical history. For years, a mysterious disease called milk sickness (also known as "milksick," the "trembles," the "slows," and "sick stomach") plagued early Hoosiers. There were many theories as to the disease's cause. Daniel Drake, the well-known Cincinnati physician and medical educator, for example, attributed its cause to eating the meat or drinking the milk of animals that had grazed on poison oak. While Drake was correct in ascribing the disease's original cause to a plant, the actual plant remained unknown until the 1920s. At that time, the disease was traced specifically to the white snakeroot plant or, rather, to the consumption of milk from cows that had eaten it. The plant contains the poison tremetol.



Plysta by With Rossing

Homeopatbic physicians rebelled against the use of bloodletting and barsh drugs and instead gave their patients minute doses of various medicines. Shown above is a homeopathic medical kit from the 1840s.

Fund-Raising Campaign

(Continued from Page 2)

public with a wide variety of educational programs. The fund-raising committee hopes to increase interest in the museum, not only among physicians, but also within the lay community. It also hopes to raise money to restore the Old Pathology Building, install a climate control system to protect the museum's collections, and develop traveling exhibits on the history of medicine in Indiana.

Museum Plans Special Events

The Indiana Medical History Museum will sponsor two exhibits and one special program during the upcoming months. From February 18 through March 18, the museum will participate in The Children's Museum's "Kids Health Fair" by mounting an exhibit at The Children's Museum. The exhibit traces the development of the stethoscope and contains a variety of stethoscopes from the Indiana Medical History Museum's collection, including a replica of the first stethoscope, invented in 1816. Early stethoscopes were merely cylinders with an earpiece on one end and a chestpiece on the other. On February 18, 19, 25, and 26, children will be able to use some of these early stethoscopes.

As detailed on the first page, the museum has worked with the Indiana Historical Society to mount an exhibit on antebellum medicine. The exhibit will be on display at the Society from March 12 through June 30.

In the spring, the museum plans to open a medicinal herb garden on the museum's grounds. The garden will feature various plants such as butterfly weed, mint, comfrey, camomile, and digitalis. These herbs were used in both home medicine and regular practice. More information about the garden will be forthcoming.

Reception Honors Author-Editor

On Friday, March 23, 1984, author-editor Madge E. Palmer (nee Pickard) will be the special guest at a wine and cheese reception to be held from 4 p.m. to 7 p.m. at the Indiana Historical Society. The reception is open to all members of the Society and the Indiana State Medical Association and Auxiliary. Those attending will have an opportunity to meet Mrs. Palmer and view the Society's exhibit on antebellum medicine (see front-page article).

Mrs. Palmer holds a M.A. in history from Indiana University and is coauthor with the late R. Carlyle Buley of *The Michvest Pioneer: His Hls, Cures, and Doctors* (Crawfordsville, Indiana, 1945; New York, 1946). After earning her degree in history, Mrs. Palmer worked at the Sterling Medical Library at Yale. She then became an assistant editor of *The Journal of the History of Medicine and Allied Sciences* and subsequently an associate editor at Alfred A. Knopf, Inc. After leaving Knopf, she worked for a time as a free lance editor and writer.

In 1982, Mrs. Palmer donated her large collection of early nineteenth-century medical books, including some very rare and important domestic medical books, to the Indiana Historical Society Library.



The coauthor of **The Midwest Pioneer: His Ills, Cures, and Doctors**. Madge E. Palmer (nee Pickard), will be the special guest at a Society reception to be held on March 23.

The Society is grateful to the Oliver Winery in Bloomington, Indiana for donating wine for this special event.

INDIANA MEDICINE offers its readers a Continuing Medical Education series of articles prepared by the faculty of the Indiana University School of Medicine. The program is coordinated and supported by a grant from the school's Division of Continuing Medical Education.

As an organization accredited for continuing medical education, the Indiana University School of Medicine certifies that this CME activity meets the criteria for one credit hour in Category 1 for the Physician's Recognition Award of the American Medical Association, provided it is used and completed as designated.

To obtain Category 1 credit for this month's article, complete the quiz on page 207.



CHILD ABUSE

DEBORAH D. RADECKI, M.D. Indianapolis

BUSE AND NEGLECT are major problems affecting children to-day. Ellerstein states that although no exact statistics are available, approximately 1-3% of children in the United States are abused or neglected, and approximately 4,000 children die per year from abuse.

Maltreatment of children has existed throughout history. In various times and places infanticide has been practiced for population control, illegitimacy, ritual belief or imperfection, and beating has been considered an acceptable form of punishment to maintain discipline. In 17th century Connecticut and Massachusetts laws were passed to impose the death penalty on unruly children. The industrial revolution increased the exploitation of children as laborers.

It was not until the 1940s that descriptions of physically abused children appeared in the medical literature, and the medical profession did not look very seriously at the problem until 1961, when

the American Academy of Pediatrics under Dr. C. Henry Kempe sponsored a symposium on the problem of child abuse. It was at that time that Dr. Kempe proposed the term, "The Battered Child Syndrome." Over the next five years all 50 states developed laws dealing with child abuse, and since then numerous revisions have been made.

In 1981 the Indiana General Assembly made the following amendment to Public Law 266:

- "A child is in need of services if before his eighteenth birthday
- 1. his physical or mental health is seriously endangered as a result of the inability, refusal or neglect of his parents or guardian or custodian to supply the child with necessary food, clothing, shelter, medical care, education or supervision
- 2. his physical or mental health is seriously endangered due to injury by the act or omission of his parent, guardian or custodian
 - 3. he is the victim of a sex offense

The author is a Clinical Instructor in Pediatrics, Indiana University School of Medicine, Indianapolis.

Correspondence: Continuing Medical Education, Indiana University School of Medicine, 1120 South Drive, Indianapolis, Ind. 46223.



FIGURE 1: Numerous bruises in various stages over the back and buttocks.

- 4. his parent, guardian or custodian allows him to participate in an obscene performance
- 5. his parent, guardian or custodian allows him to commit a sex offense
- 6. he substantially endangers his own health or the health of another; and needs care, treatment or rehabilitation that he is not receiving, and that is unlikely to be provided or accepted without the coercive intervention of the court."



FIGURE 2: Child with scars and linear bruises in various stages. Also note the loop lesions, presumably from beating with an electrical cord.

The physician plays a very important role, not only in recognizing when an incident of child abuse occurs, but also in reporting it. There seems to be a great deal of misconception about who can report, both on the part of the public and the profession. Many lay persons think that only physicians can report child abuse, and some professionals think only pediatricians or those persons affiliated with a county hospital may do so. In truth, any person who suspects

child abuse is bound under Chapter 11, Public Law 276, to report it. The Indiana Department of Welfare provides a "form 310" for this purpose; this is a one-page form which can be quickly completed. Failure to report is a class B misdemeanor.

Chapter 11 also contains a section on qualified immunity. It states that any person other than the person accused of child abuse who:

1. makes or causes to be made a

report of a child who may be victim of child abuse or neglect

2. causes photos or x-rays to be made

3. participates in a judicial proceeding resulting from a report that a child may be a victim of child abuse or neglect is immune from any civil or criminal liability that might otherwise be imposed because of such actions . . . A person making a report that a child may be a victim of child abuse . . . is presumed to be acting in good faith."

In the past many physicians have been reluctant to report incidents of child abuse because they did not want to damage their relationship with the family and/or they wished to respect as privileged communication that which was told to them. However, Chapter 11 specifically makes withholding information about suspected child abuse for these reasons illegal. It states: "The privileged quality of communication between a husband and wife, or between a medical practitioner and his patient is not ground for:

- 1. excluding evidence in any judicial proceeding resulting from a report of a child who may be a victim of child abuse or neglect
- 2. failing to report as required by this chapter."

How does one go about making the diagnosis of child abuse? As with other areas of medicine, the history and physical exam are the most valuable tools. Occasionally, a case may be brought to the physician by a teacher, grandmother, spouse, etc., who is concerned that child abuse has occurred. More commonly, a child will present with specific injuries characteristic of abuse. Usually, bruises over the lower back and buttocks have been intentionally inflicted (Figure 1). Bruises over soft areas of the face and neck may be caused by slapping or grabbing. Frequently, the outline of the instrument used can still be seen, e.g., on the face or arms one may see the parallel lines of the fingers. Children beaten with belts, electrical cords, or other switches will often have bruises or old scars in the shape of the object. Electric cords



FIGURE 3: Immersion burns of hands in a "glove" distribution.

will give "loop" scars, a pattern frequently seen in child abuse (Figure 2). In the case of an accidental injury, usually a single area of abrasion will be noted. When numerous areas of injury are noted, as well as injuries of different ages, abuse should be suspected. Children who are choked or strangled will frequently have petechiae on the face, often accompanied by scleral hemorrhages.

Burns are seen in about 10% of abuse cases. The most common of these is the circular cigarette burn. A certain pattern of immersion burn is pathognomonic of child abuse. One or both hands or feet are held in very hot water, and the burn is the same degree of severity over the entire burned area with a distinct border where the skin is not burned. An example of such an immersion burn is seen in Figure 3. Another pattern of immersion burn occurs when a child has his or her buttocks pushed down into a tub of hot water. Usually the centers of the buttocks are pressed firmly against the bottom of the tub, and these areas are less burned than the surrounding skin. Also, the flexion creases will be relatively spared. If a child accidentally fell in the water and struggled to get free, as the parent may claim, all surfaces would be equally burned.

Some injuries are not in themselves

diagnostic of abuse, but the parent's explanation of how they occurred, or an unusual delay in seeking medical attention, make them highly suspicious. For example, a broken leg or severe head trauma for which there is no explanation in an infant is suspect, since a child this young is not spontaneously mobile enough to sustain these injuries. A parent who changes his or her story about the injury is also to be suspected.

Lab studies usually play a minor role in the diagnosis of physical abuse. A child with multiple bruises needs a CBC with platelets and clotting studies to make certain that there is no hematological problem to account for the bruising.

Laboratory studies do serve an important role in suspected sexual child abuse. Gonorrheal cultures of the pharynx, rectum and urethra/vagina should be obtained as well as a urinalysis, urine culture and VDRL. Results of these tests may be critical in substantiating a case of sexual abuse.

Radiographic studies play a very important role in the diagnosis of child abuse, both to document a known injury and to search for additional occult and/or old injuries. A healing epiphyseal-metaphyseal fracture of an infant is almost pathognonomic of abuse, since a child this young does not spon-

taneously get into a situation in which such a fracture would occur. Transverse or spiral fractures of the midshafts of the long bones are also likely to be due to abuse. Although these are not pathognomonic, the physician should suspect abuse if there is a lack of correlation between (1) the type of injury observed, (2) the known mechanism required for its production and (3) the purported mechanism for its production. The radiologic survey may demonstrate that the age of a fracture is incompatible with the history as given and/or may demonstrate additional old or new fractures which would otherwise remain undetected.

The neglected infant or child may be harder to diagnose than a physically abused child. Most will present with failure to thrive. They will exhibit emaciation, with loss of buccal fat pads, thin extremities, poor hygiene and apathy. Observation in the hospital on an appropriate caloric intake may be required to make the diagnosis. The infant should show a good weight gain in the hospital if there is nothing organically wrong. Several trials of care at home with poor weight gain and subsequent improved growth in the hospital may be necessary to make the diagnosis of neglect.

Even though a physician has the knowledge to diagnose child abuse or neglect, in the past these conditions have often been left unreported, even in obvious cases. Reasons given for this include (1) concern about loss of the parents' good will, (2) lack of support from other health professionals and (3) sometimes actual fear of harm from parents. Physicians are also concerned about the time commitment of getting involved, as well as a possible lack of action taken after filing a case.

The formation of local child protection teams has been very helpful to both the physician and the families involved in child abuse. Chapter 1I mandates that directors of public welfare departments appoint child protection teams, and this has now been accomplished in all counties in Indiana. The teams are generally

community wide and multidisciplinary, with 5-11 members from differing professions, e.g. physicians, nurses, social workers, mental health workers, persons from local law enforcement agencies or school board representatives. In larger cities individual hospitals will also have their own child advocacy committees and specific protocols for handling child abuse cases.

When a physician is having difficulty in knowing whether or not a case should be reported, it is often helpful to discuss this with members of the hospital's child advocacy committee, if there is such a group. In addition, members of the committee can assist with the reporting process, perhaps offer short and long term counseling, recommend support groups for both the abused and the abuser, and play an active role in supporting the problem family complex. The social worker will be able to spend the necessary time interviewing the family. (This often requires play therapy with the abused child, particularly in cases of sexual abuse.) He or she can make further calls to investigate the case with the school, community health nurses, or other persons involved with the family.

Once it is suspected that a child may have been abused or neglected, the following protocol should be initiated:

- I. History: Take a good history from caretakers, the alleged abuser and the child. Include significant verbatim quotations and the details of how and when the injury was said to have occurred. If there was a delay in seeking medical attention, find out why.
- 2. Physical exam: Describe the appearance and estimated ages of injuries, their specific number and size. Make a diagram to supplement the description. Do an ophthalmologic exam, if indicated. Obtain appropriate consultations as needed: neurosurgery, general surgery, plastic surgery, etc.
 - 3. Laboratory studies:
 - a. Clotting studies if bruising is present
 - I. CBC with platelets
 - 2. PT, PTT, bleeding time
 - b. Tests if sexual abuse is suspected

- Gonococcal cultures of pharynx and rectum, plus the vagina in females and urethra in males
- 2. VDRL
- 3. Urinalysis and culture
- c. Radiographs
 - 1. Long bones
 - Skull films. These may need to be repeated after I0-14 days in the presence of significant trauma, since some injuries will not show up immediately.
- d. Color photographs of the child's skin lesions. Indiana law requires that a physician or hospital reporting a case of suspected child abuse should obtain color photographs of any relevant skin lesions. These must be labeled, dated and signed by the physician. The agency taking the photos can be reimbursed for reasonable costs.
- 4. Notification of a social worker. He or she may be of assistance in
 - Notifying child protection agency orally of the incident as soon as you suspect that the child has been abused or neglected
 - Filing a written report to the county's child protection services within 48 hours.

If you do not have access to a social worker and do not know if your hospital has a child protection team, check with your hospital administration. If there is no hospital team, then you should directly contact the Division of Child Protection Services in your county welfare department.

- 5. If the child's life seems at potential risk, admit the child to the hospital. If the parents refuse admission, notify the local police department to get temporary custody of the child.
- 6. Inform the parents that a form 310 is being filed. Be honest with the parents and explain why this is being done. Inform them that there will be an investigation by a child protection service.
- 7. Ascertain that someone will be checking on the welfare of any siblings.

When a physician is called to court for a case of child abuse, it is frequently his or her proper preparation of the medical facts that will help the abused child. Before going to court, all information should be reviewed carcfully with the other child protection service personnel who are being subpoenaed and with the prosecuting attorney, to avoid inconsistencies in testimony. The important aspects of the history, physical exam and laboratory data should be pointed out to the prosecuting attorney. If the prosecuting attorney is a novice in child abuse cases be sure to explain the importance of having the hospital record admitted as evidence, so that the physician will be able to refer to this record while on the witness stand. Also, any photos or x-rays to be used in court should be prepared ahead of time, and arrangements made for the necessary equipment to show them. As an expert witness by virtue of his or her M.D. degree, the physician should present an image of confidence and knowledge of the subject matter. As an expert (and after the pertinent data are established), the physician may state his opinion that the child was abused. Frequently, it is the testimony of the examining physician

that persuades a trial judge that a child has been abused.

Some physicians who have been involved in child abuse cases in the past have been left frustrated with their resolution. However, in the past five years improvements have been made in reporting cases, following up with families, organizing support groups, providing education for the parents, etc.

We need to continue to identify the child in need of help, but we also need to learn to identify the family structure at risk and to step in before abuse has occurred. Toward this effort a few of the questions one needs to consider are:

- 1. Did the mother want this pregnancy?
- 2. Does she have a support system to help care for the infant?
- 3. Was the mother or father abused as a child?
- 4. Are the parents disappointed with the sex of the infant?
- 5. Do the parents have unrealistic expectations of the infant?
- 6. Is this a difficult or colicky baby? Hopefully, by working with child protection teams, social workers, community health nurses, parent aides, etc., we can help decrease the number of child abuse

cases. We have the laws necessary to fight child abuse, and we need to use them. However, no law will be the ultimate answer, and the prevention and treatment of child abuse and neglect in the long run depends upon healthy family and community life. We as physicians can also aid in this area by our involvement as consultants to educators, community agencies, and parent education classes.

In summary, child abuse is a very serious problem in the United States today. Although it is not solely a medical problem, the physician serves a critical role in the community's efforts to report, treat and prevent child abuse.

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Pelvic Inflammatory Disease

Trends in Indiana

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PIVIC INFLAMMATORY disease (PID) is defined as an ascending genital infection in the non-puerperal patient who has not had recent gynccologic instrumentation or surgery, and includes any combination of salpingitis, endometritis, oophoritis and pelvic peritonitis. Although pelvic inflammatory disease is not a reportable syndrome, it is the most common and important complication of gonococcal and Chlamydial infections in the United States today.

The National Ambulatory Care Survey found one million cases of P1D occurring per year.11 Each episode required three physicians' visits. The annual cost for pelvic inflammatory disease, associated ectopic pregnancy and fetal mortality is close to \$3 billion.4 In 1981, information from one insurance carrier reporting approximately one-fourth of all estimated cases of PID in Indiana showed the average charge for one hospitalized episode of P1D was \$2,000, with the average length of stay at 6.8 days.1 Therefore, the cost in Indiana alone for hospitalized PID is in excess of \$10 million annually.

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Incidence of PID

So how much P1D is there in Indiana? Often the response from emergency room doctors has been, "We just don't see much of that in our community." However, according to the Indiana Inpatient Discharge Survey, the 1981 estimated annual incidence of inflammatory disease of the ovary, Fallopian tube, pelvic cellular tissue and peritoneum was 5,172 cases.8 This figure is consistent with other estimates. The National Hospital Discharge Survey found 211,000 women hospitalized annually for P1D.12 By factoring the Indiana statistical component of the national figure (1/50), there are 4,220 estimated hospitalized cases in Indiana annually. If, as it was predicted by Curran,4 15% of all cases of PID are hospitalized, there should have been 34,480 total episodes of PID that year. The incidence of PID as a primary diagnosis of hospitalized patients in Indiana rose 51% between 1972 and 1981 (Figure 1).8

Recognizing P1D as a sexually acquired infection is the first step in managing this public health problem. Initial episodes of sexually transmitted P1D occur most often in the 15-24 year age group. According to the 1980 census, 19% of Indiana's total population was between the ages of 15-24 and there has been a 25.1% increase in the age group 20-24 in the last decade.² Finding high rates of P1D in this age group is consistent with the rise of other sexually acquired infections at these ages.

Infertility and Ectopic Pregnancy

What type of complications occur as a result of pelvic inflammatory disease?

The incidence of female infertility tripled in the U.S. during the last decade. 1nvoluntary tubal occlusion after just one episode of PID is 12%, after two episodes 35%, and after three episodes 75%.13 Experiencing one episode of salpingitis predisposes women to subsequent episodes: 27% of all women experience a second episode; and 53% of those having two episodes will experience another.9 Other serious sequelae include ectopic pregnancy, hysterectomy, pelvic abscess and chronic pelvic pain. About 50% of all ectopics are due to prior P1D.4 In the U.S. the number of ectopic pregnancies rose 118% between 1971 and 1978.7 According to the Indiana Inpatient Discharge Survey, ectopic pregnancy rose 67% in Indiana between 1972 and 1981 with an estimated 960 ectopics in 1981 (Figure 2).8 As predicted, the increasing trend in PID in Indiana from 1972-1981 was followed approximately five years later by an increase in ectopic pregnancy.

Control efforts on the part of venereal disease epidemiologists are twofold: (1) to reduce disease incidence and (2) to reduce complications. Suspicion and rapid diagnosis is the first step in managing the patient with PID. Signs and symptoms of P1D include lower abdominal pain, lower abdominal tenderness, adnexal tenderness and/or mass, tenderness on cervical motion, fever and chills. The severe PID as seen in the emergency room with "chandelier sign," high fever, peritonitis, adnexal mass, etc., is only a small proportion of total cases. It is suggested that most clinicians need to lower their personal diagnostic thresholds. Confirmation by laproscopy or laparotomy may be necessary in diagnostic uncertainties, but is often impractical. A history of

predisposing factors like multiple sex partners, past PID, IUD use and menstruation should raise the suspicion of salpingitis.

Etiology and Therapy

The endocervical pathology of PID has been recognized to be polymicrobial. The etiologies have been classified as 30-50%. Neisseria gonorrhoeae Chlamydia trachomatis 20-40%, and Mycoplasma hominis 10-20%.7 Since a mixture of anaerobic and aerobic microorganisms is often found in female upper genital infections, an endocervical culture for gonorrhea should be collected from all women suspected of experiencing PID. Patient management can be tailored by classifying infections as gonococcal or nongonococcal. The availability and expense of other laboratory testing is a factor in determining the causative agents. However, withholding treatment until laboratory tests and other objective evidence of inflammation confirm clinical impressions may increase the risk of long-term sequelae.

It is recommended to begin antibiotic therapy immediately. The Centers for

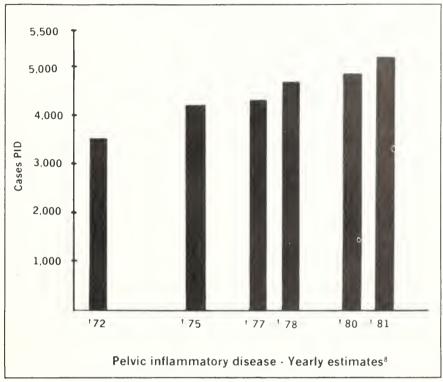


FIGURE 1

Disease Control "Sexually Transmitted Disease Treatment Guidelines 1982"³ were modified to combine regimens providing a broad activity against the major pathogens. Single drug therapy does not adequately cover all causative organisms that may be present in the PID patient. The Ambulatory Treatment Schedule recommends any one of the following regimens which provide optimal activity against *N. gonorrhoeae and C. trachomatis*:

Cefoxitin: 2 g, 1M, or Amoxicillin: 3g, by mouth, or Ampicillin: 3.5g, by mouth, or Aqueous Procaine Penicillin G: 4.8 million units, 1M, at 2 sites, each along with probenecid 1g, by mouth;

Followed by Doxycycline: 100mg, by mouth, twice a day *or* Tetracycline HC1: 500 mg, by mouth, 4 times a day for 10-14 days.

Hospitalization of women with acute salpingitis is strongly recommended for uncertain diagnosis, surgical emergency, pelvic abcess, severe illness, pregnancy, therapy noncompliance, or clinical follow-up. Examples of the combined regimens from the 1982 STD Treatment Guidelines³ for hospitalized patients in-

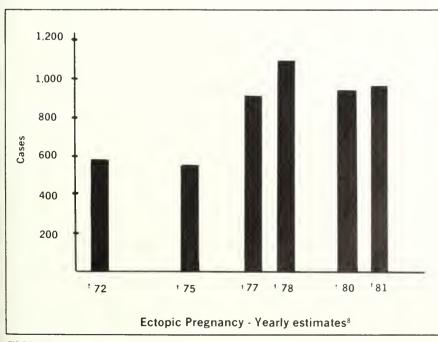


FIGURE 2

clude doxycycline plus cefoxitin, clindamycin plus gentamicin, or doxycycline plus metronidazole.

Epidemiologic Considerations

What special problems exist in managing these high-risk patients? Several factors have been identified which outline the need for a continuum of care: the sexually transmitted nature of the illness, compliance with therapy, and masked complications. It has been shown that only 36.5% of women with uncomplicated gonococcal infection visit a venereal disease clinic compared to 70% of males-largely due to the symptomatology.6 Women with acute pelvic pain often do not associate that pain with a sexually transmitted disease. One health department study showed that 83% of women with gonococcal pelvic inflammatory disease sought care in a non-VD clinic setting such as an emergency room or family planning clinic.6 Since symptoms generally resolve in 3-5 days, patients are not motivated to complete the prescribed oral medication or they may share their medicine with sexual partners. Also, patients do not report to their alleged "family physician" for re-evaluation.

Who takes responsibility for ensuring an adequate evaluation and treatment of all exposed sexual partners to this sexually transmitted infection? Too often physicians are satisfied to treat epidemiologically only one sexual partner. Often patients who visit family physicians are embarrassed to claim exposure to multiple sex partners. The erroneous assumption that females have only one sexual consort or that the patient "is not that kind of girl" paves the way for reinfection and increased infertility. Skilled epidemiologists who identified infected contacts to women with gonococcal PID found that 47% of source contacts had asymptomatic infection.10 It is believed that these asymptomatic males represent a core group which serves as a reservoir of infection. The high asymptomatic rate in sexual consorts poses a problem to the skilled counselor who works to educate the patient about the sexually transmitted nature of her infection and the need for all sexual partners to be examined.

Patient Management

To reduce morbidity and the complications of PID, public health efforts should merge with those in the private sector to provide for accurate diagnoses and adequate therapy as well as rapid disease follow-up. It becomes the responsibility of the public health investigator to influence and ensure that follow-up care has taken place whether it be from a private or public provider. The medical management includes an assessment of the patient within 3-5 days after diagnosis and initiation of therapy.' In this visit another bimanual examination, evaluation of symptoms and check on therapy compliance is necessary. Within five days from the initial visit a patient should be interviewed by an experienced STD investigator. This session emphasizes behavior messages such as the following: take all medicine, return for follow-up tests, abstain from sex until tests-of-cure are negative, refer all sexual partners, reduce future disease risk, and respond quickly to disease symptoms. Timing the interview is very important as it is hoped that all infected sexual partners exposed within 60 days prior to the initial visit will be confidentially identified and examined before the PID patient completes the therapy. For gonococcal PID, a test-of-cure should be performed 3-7 days after completion of therapy to detect resistant organisms or treatment failure. An additional test in 4-6 weeks is warranted since these women are at high risk of acquiring infection again.

Conclusion

It makes sense for public and private providers to join together in providing the total package of care that females with pelvic inflammatory disease require. Failure to cooperate and using a cloak of "patient confidentiality" only targets the patient you are trying to help for reinfection, infertility, and ectopic pregnancy. Confidential interviewing and counseling can be arranged with public health investigators. Since we all are truly interested in the welfare of the patients in our care, then our obligation includes prevention of reinfection and serious sequelae by adequately treating all sexual consorts to sexually transmitted PID.

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Notes from Down Under

Abstracts from the Medical Journal of Australia

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The August 1983 issue of the *Medical Journal of Australia* contained four articles¹⁻⁴ of particular interest. Following are abstracts of those articles.

* * *

Cigarette smoking increases the risk of peripheral vascular disease. One hundred fourteen patients who were smokers underwent bypass graft surgery for peripheral vascular disease. Forty-two of these patients ceased smoking and 72 continued the habit. Eighty-six per cent of all deaths in the combined group were from vascular causes. The remaining 14% included several patients dying of lung cancer or respiratory failure.

The five-year survival of those patients who stopped smoking was 66% and of those who continued 36%. The excessive death rate in those who continued to smoke was almost entirely due to major arteriosclerotic or thrombo-embolic events.

Further prospective studies to substantiate these preliminary findings that perhaps it is never too late to stop smoking would be helpful.

* * *

Phenylpropanolamine is a common ingredient in various decongestant and appetite suppression products.² Previously normotensive patients may become significantly hypertensive when taking such products containing as little as 60-80

mg. of phenylpropanolamine.

Eight young to middle-aged women experienced symptoms including severe headache and at times nausea, vomiting, sweating, etc., shortly after taking an appetite suppressant containing this substance. Although these patients recovered uneventfully, other studies have reported serious complications, including intracerebral hemorrhage. Patients with prior hypertension may be at risk especially if on medications that make them more sensitive to pressor substances.

It is important to be aware of this syndrome and to question a patient closely regarding the use of phenylpropanolamine-containing substances as well as other over-the-counter or prescription sympathomimetic agents when they present with sudden or worsening hypertension.

* * *

Although rare, chronic mucocutaneous candidiasis may be a disabling disorder. Topical antifungal therapy, intravenously administered amphotencin B, transfer factor, and miconazole nitrate may not result in sustained improvement.

An 18-year-old patient with this disorder was treated with oral ketoconazole and showed improvement in three days and clearing of mucosal lesions within five weeks. After 18 months of treatment with ketoconazole, without side effects, the disease has not recurred.

Properly monitored long-term treatment with ketoconazole may represent the best treatment in such cases.

* * *

Heparin administration may be associated with the delayed onset of

thrombocytopenia, which may be associated with paradoxic thromboembolic phenomenon.⁴

Twelve patients were described in whom thrombocytopenia developed a week or so after initiation of either "prophylactic" or therapeutic use of heparin. Sudden and severe thrombo-embolic events occurred in seven of these patients. These included recurrent deep vein thrombosis, femoral artery occlusion and sagittal sinus thrombosis. Heparindependent platelet aggregating factor was found in the patients' plasma during the thrombocytopenia. Other causes of thrombocytopenia were excluded and the platelet count normalized within days of cessation of heparin therapy.

This syndrome, likely mediated by an immunoglobulin-G antibody capable of activating the platelet-prostaglandin pathway and producing potent platelet aggregating mediators, deserves recognition. Therapy includes stopping heparin, reversing any heparin present with protamine, and use of warfarin sodium and possibly platelet inhibitors.

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Intensive Care: The Social Worker's Role

Critical Care Medicine

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■ HE URGENCY OF admission to an intensive care unit requires mobilization of the expertise of a medical team comprised of physicians, nurses, dieticians and therapists. The function of a social worker can also be of vital significance as a member of this team. The absence of privacy for patients and families, the ever present stressful environment, the noise, the frequent emergency resuscitations and other exigencies of intensive care such as infrequent visiting hours may raise questions and fears in the minds of the patients' families as well as patients themselves. Some concerns by relatives and friends are rational and many are irrational. Ouestions regarding quality of care, patient progress in their illness, and fears of all kinds are uppermost in their minds. Sometimes these thoughts are openly expressed, but most often they aren't ventilated or coped with effectively.

Dealing with such problem areas is in the interest of the patients, their families, and the staff. Also of concern is the potential that misunderstandings could result in lawsuits or other complaints

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levied against the hospital and the medical care team. Social service support in the ICU may provide an effective mechanism for "risk management" in that the social worker can act as a buffering agent by clarifying misperceptions of patient care problems in addition to providing the emotional support for troubled families.

Social workers are also skilled in identifying those community financial resources which can be tapped for the patient with limited means in order to defray hospital charges which the patient would otherwise not be able to pay. Bringing to the ICU team an understanding of human behavior and knowledge of community resources, the social worker can act as an important liaison between patients, their families, and the experiences of intensive care.

This review serves to explore those roles of the social worker which enhance communication and coping by the patient, family, and staff in the ICU.

Psychosocial History

Knowing specific facts about the patient's history will assist the medical team in individualizing the patient's care. Such factors should include the patient's age, occupation, past medical history, psychiatric history if indicated, and what factors, if any, precipitated the patient's admission. It is helpful to obtain information regarding any limitations, prior to hospitalization, as a baseline for the patient. The social worker should identify the patient's support systems if any for the purpose of communication of the patient's status and for identification of his/her foundation for emotional strength and support which can be utilized throughout the patient's care.

Assessment

Further assessment of the patient by the social worker should include both the emotional reactions and needs of the patient as a result of this crisis as well as the environmental familial needs

Emotional Reactions: Most people in crisis experience the following phases of emotional reactions to recovery: (Figure) High anxiety or emotional shock, denial, anger, remorse, grief and reconciliation.1 Assessing which phase of emotional reaction a patient and family is experiencing helps to understand how the patient and family perceive the present circumstances and their capacity to process, integrate, and adjust to the medical information given to them at a specific time, as well as identifying what level of assistance may be needed while providing information to them. This is particularly important when it is necessary for families to participate in life or death decisions. This information can then be shared with other staff for a consistent and supportive approach.

Environmental Needs: The sudden admission of the patient to the ICU can impact the functioning of a family unit severely. This is compounded if the family's economic survival is dependent on the patient's physical abilities to work. Marginally surviving families are most affected since they do not have the means to build in protections such as insurance or savings for emergencies. This problem is often exacerbated when the medical care needed for the patient requires that he/she be transferred to a regional trauma center many miles from home. Areas to be assessed include: lodg-

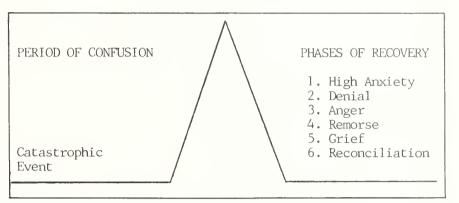
ing, financial (both long and short term), child care and transportation.

On-Going Intervention

The information obtained through the psychosocial history and assessments of patients' emotional status and environmental needs provides the foundation for intervention. As the patients and their families move through the crisis phases of emotional reactions, they too will need supportive care. The social worker's efforts in helping the patients and families explore their own resources to fulfill these needs provides dignity and sensitivity in an atmosphere which appears impersonal. Having noted who the patient's support systems are in the assessment thus determines whom the social worker can call upon when immediate support is needed. The social worker through daily observation of visitors can also identify those who are of assistance to the family.2

In many instances, the social worker may be the primary source for support to a patient or family. Providing and interpreting information about the patient's situation in relation to the unit is important. Language the patient and family can comprehend will decrease anxieties and aid in their coping at a time that is emotionally overwhelming. These regular contacts with the patient and family provide a mechanism for assisting in adjustments to patients' status changes, new permanent disabilities, prognosis or death. Utilizing mental health centers, community support groups and clergy during this time is effective.

Mobilizing community resources will be essential in caring for the environmental needs. Most patients and families are not aware of the resources available to them. The social worker's knowledge of federal, state, and local agencies and other emergency resources and their application processes can guide an emotionally distraught family through the necessary tasks for assistance. If indicated, this should include early intervention and preparation for the patient's eventual discharge planning once



EMOTIONAL response to crisis recovery.1

these care needs have begun to be identified.

Follow-up

Once the patient leaves intensive care he/she may have a whole new set of emotional and environmental needs which should be assessed. Therefore, contacting the new unit's social worker for follow-up assessment and goal setting will provide smooth transition from ICU to the ward. When a patient dies, follow-up contact with the patient's family is helpful. The social worker can be a vital link in returning the family to daily life without the patient. Referral for assistance in coping with this loss may be needed.

Staff Support

The many duties of an ICU staff person must be performed in an atmosphere of tension, requiring highly skilled technical responses under pressure of time. The additional responsibilities of providing sensitive, empathetic care to the patient and family can at times be an overwhelming expectation of staff. Escalation of frustrations often lead to a breakdown in communications between staff, patients and families, and between co-workers themselves. Often physicians or supervisors will become objects of the frustration or scapegoats.³

The turn-over rate of personnel in ICUs throughout the United States is largely attributable to the high stress associated with the job. The social

worker, through informal or formal discussions such as staff stress groups, can address the frustrations of job, issues of death and dying, loss of grief, and interpersonal communication skills, thus helping staff to note their individual reactions to stress and explore outlets and coping mechanisms. This promotes cohesiveness among staff, defuses the charged ICU work environment, may help reduce the turn-over rate of personnel and result in happier employees. This role can often effectively be shared between social worker and chaplain.

Summary

The social worker's skills can easily be utilized in the ICU. The social worker can assist in coordinating the emotional and environmental needs of patients and their support systems. Working closely with physicians and nursing staff as a team member, the social worker can promote timely and effective communications in completing the overwhelming task of patient care in life and death situations.

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The Faith Assembly: A Study of Perinatal and Maternal Mortality

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T. S. DANIELSON, M D.²
ANDREW M. KAUNITZ, M D.³

Abstract

An investigation was conducted of perinatal and maternal mortality in a religious group in Indiana which practiced out-of-hospital, non-physician-attended birthing with no prenatal care. Members of the Faith Assembly religious group had a perinatal mortality three times greater and a maternal mortality rate about 100 times greater than the statewide rate.

N MAY 1983 the Indiana State Board of Health received report, cessive perinatal and maternal mortality in northeastern Indiana possibly due to medical neglect. Approximately 40 Indiana deaths and 52 Midwestern deaths were said to have occurred over the past eight years in a religious group known as Faith Assembly, a large, fundamentalist church which shuns all medical attention in favor of "spiritual" healing. Consequently, pregnant followers receive no prenatal care, laboring and delivering at home without medical assistance, although some unlicensed and untrained "laymidwives" have attended some of the women during parturition.

PRENATAL CARE

NO PRENATAL CARE

LINSPECIFIED

PRENATAL CARE

NO PRENATAL CARE

UNSPECIFIED

TOTAL

The Faith Assembly, a 17-year-old movement whose church headquarters is located in northeastern Indiana, is said to have followings in 12 Indiana cities, 19 states, and six foreign countries. Most of Indiana's estimated 2,000 members reside in Kosciusko and Elkhart Counties. The group's racial composition is said to be predominantly white, with members representing diverse socioeconomic strata. Many members are married couples in their twenties or thirties, in large part college-educated, and with children.

In cooperation with the Centers for Disease Control, Atlanta, Ga., the Indiana State Board of Health assembled an investigative team to examine

TABLE 1

Unattended Live Births, Elkhart, and Kosciusko Counties, Indiana 1975 - 1982, According to Prenatal Care Received.

16 annula	- Divi	dan at	3.4 - 4 - 4 - 4 - 4	1	
	ant, Divi				
	Indiana	State	Board	01	Health,
Indianap	olis.				
2Directo	r, Divisio	on of l	Materna	Lan	id Child
Health,	Indiana	State	Board	of	Health,
1ndianar	olis.				

^{&#}x27;Epidemic Intelligence Officer, Pregnancy Epidemology Branch, Division of Reproductive Health, Center for Health Promotion and Education, Centers for Disease Control, Atlanta, Ga.

1975	1976	1977	1978	1979	1980	1981	1982	FA + NON-FA	FA
1	0	3	12	16	10	9	23	74	
0	2	1	15	17	18	29	30	112	11:
12	13	10	6	3	4	4	0	52	5.
								238	16
3	1	3	8	9	6	3	6	39	-
13	14	14	17	20	34	32	35	179	179
1	0	0	0	0	0	0	0	1	
		-						219	180
								457	344

^{1/2}PRENATAL = AT LEAST ONE PRENATAL VISIT

Acknowledgments: William D. Ragan, M.D., Jean M. Chaney, Gwen Rossell, Ronald G. Blankenbaker, M.D., and David J. Edwards, M.D.

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perinatal and maternal mortality rates pertaining to Faith Assembly members in Kosciusko and Elkhart Counties, Indiana, 1975-82.

Methods

Extensive interviews with public health and selected county officials, nurse practitioners, and investigative reporters for the Fort Wayne News-Sentinel confirmed that the Faith Assembly (FA) was the only group in the area abstaining from all medical and prenatal care. Furthermore, they remain the only group practicing unattended, out-of-hospital birth in the selected counties.

First, birth records were reviewed for all non-physician-attended, out-ofhospital births for 1975 through 1982 in Elkhart and Kosciusko Counties. Those cases in which prenatal care was not received or in which this item was not specified were considered Faith Assembly live births. These cases were further reviewed with local public health nurses to confirm FA membership. FA birth records were categorized by maternal race, age, educational attainment and marital status.

Second, FA maternal death rates (those related to pregnancy and occurring in women up to one year following termination of pregnancy) and perinatal death rates were determined for the selected counties from 1975 through 1982. Perinatal deaths were defined to include stillbirths (20 weeks gestation and greater) and neonatal deaths (deaths occurring within 28 days after birth). Additionally, death certificates for Elkhart County were matched manually against live-birth records and fetal-death certificates for still-births to Elkhart County residents during those years to identify cases for which no prenatal care was received or for which receipt of prenatal care was not specified. Further, case records for each maternal Indiana death reported to the Indiana Maternal Mortality Committee for 1975 through 1982 were reviewed. Coroner reports and autopsy data were reviewed when available.

Selected variables, i.e., marital status,

TABLE 2

Perinatal Vital Statistics, Kosciusko and Elkhart Counties Versus All Counties, Indiana, 1975 - 1982

	V.00.011.101/.0	51441157	ELKHART AND	ALL
CATEGORY	KOSCIUSKO COUNTY	ELKHART COUNTY	KOSCIUSKO COUNTIES	INDIANA COUNTIES
Live Births	8,390	18,014	26,404	675,416
Maternal Deaths	2	3	5	67
Neonatal Deaths	67	182	249	6,077
Stillbirths	65	149	214	6,081
Perinatal Deaths	132	331	463	12,158

race, maternal age, and education, were examined for each FA birth and compared to non-FA live births for Kosciusko and Elkhart Counties for 1978 and 1982.

State vital records for 1975 through 1982 were examined for purposes of comparing perinatal and maternal mortality rates within the selected counties.

morbidity (suspected medical neglect) and mortality were established by the State Board of Health via written and verbal contact with health care providers, hospitals, and local welfare and health departments. These agencies, as well as ex-members of the group, were contacted to verify all Faith Assembly deaths.

Surveillance mechanisms for ongoing

Local, regional, and national network television and news media coverage led to considerable public awareness and generated many details of FA activity and its fundamental characteristics.

Fishers' Exact Test was used to test for differences in rates.

Results

Between 1975 and 1982 there were 344 live births (Table 1) and 11 stillbirths (Table 4) born to Faith Assembly (FA) women in Kosciusko and Elkhart Counties of Indiana. In addition (Table 4), there were 17 confirmed FA perinatal deaths (stillborn and neonatal deaths). Thus, the perinatal mortality rate (PMR) was 47.9 per 1,000 live births as compared to Indiana's PMR of 17.8, with or without FA members, for the same

The statewide maternal mortality rate (MMR) for Indiana for 1975 through

TABLE 3

CATE	GORY	KOSCHJSKO	ELKHART	TOTALS
	15 19	4	4	8
Age (Years)	20 35		158	329
	- 35		2	
		94	84	178
Education (Years)		85	71	156
Unspec	Unspec		9	10
action is	Married	178	164	342
Legitimacy	Unmarried			
	Cauc	180	159	139
Race	Black	0		2
	Other	0	3	3

TABLE 4

Faith Assembly Deaths, Indiana. 1975 - 1982, According to Age Group and County of Residence

AGE GROUP	ALL COUNTIES	ELKHART AND KOSCIUSKO COUNTIES
Stillborn (> 20 weeks)	12	11
Neonatal (≤ 28 days)	9	6
Infant (≤ 1 year)	2	2
Children (> 1 year)	5	4
Maternal Adult	6	3
Non-maternal Adult	6	4
TOTAL	40	31

1982 was 9 per 100,000 live births (excluding FA members), as determined from *Table 2*. The statewide MMR for Indiana for 1975 through 1982 was 10 per 100,000 (including FA members).

As shown in *Table 4*, we were able to confirm 40 Indiana FA member deaths from 1975 through 1982, including 21 perinatals, 7 infants and children, 6 maternal adults and 6 non-maternal adults. Perinatal deaths represented 52%

of all deaths identified. Twenty-one total perinatal and six total maternal deaths were identified among FA members for 1975 through 1982 in Indiana. Of these, 17 perinatal and three maternal deaths were residents of Elkhart or Kosciusko Counties. Further, 31 of all 40 Indiana FA deaths, or 78% of all FA deaths identified, were residents of Kosciusko or Elkhart Counties.

The 344 FA live births identified

TABLE 5

Maternal Characteristics, 1978 and 1982, FA VS. Indiana, According to % of Live Births

		1978		1982
	FA	INDIANA	FA	INDIANA
Education > 12 years	42%	26%	46%	29%
Legitimacy (Yes or No)	100%	86%	100%	76%
Prenatal Visits (One or More)	0%	99%	0%	99%

represented 75% of the 457 out-of-hospital, non-physician-attended live births occurring in the selected counties during the specified period.

The PMR for 1975 through 1982 for FA members residing in Elkhart and Kosciusko Counties was 48 per 1,000 live births. This rate was significantly higher (P < 0.001, Fisher's Exact Test) than the Indiana PMR excluding FA members (18 per 1,000 live births) for the same period.

The MMR for 1975 through 1982 for FA members residing in Elkhart and Kosciusko Counties was 872 per 100,000 live births. This rate was significantly higher (P < 0.001, Fisher's Exact Test) than the 1975 through 1982 MMR for Indiana excluding FA members (9 per 100,000 live births).

As shown in *Figure 1*, the absolute number of FA births as determined by our criteria has risen gradually since 1975. Ninety-six per cent of FA births in the selected counties and specified period was to women 20 to 35 years of age as shown in *Table 3*. Furthermore, 45% of those births was to women with more than 12 years of education. In addition, 99% were legitimate and 98% were born to white women. As compared to Indiana maternal characteristics for 1978 and 1982, 42% and 46% of FA mothers, respectively, had more than 12 years of education (*Table 5*).

Discussion

The perinatal mortality for FA members in Kosciusko and Elkhart Counties, Indiana, for 1975 through 1982 was approximately three times greater than for the remainder of Indiana; maternal mortality for FA members was 96.9 or approximately 100 times greater than for the remainder of Indiana during the same period.

In fact, the calculated rates may underestimate actual mortality rates since some births included as FA may have represented out-of-hospital, unattended deliveries without prenatal care, not related to FA religious practice. The inclusion of 53 births to women for whom prenatal care was unspecified may have

caused substantial underestimates of perinatal and maternal mortality rates among FA members.

FA mothers in Kosciusko and Elkhart Counties were found to be predominantly white, well-educated, and married.

Precise FA membership could not be determined as leaders of the church declined to respond to fact-finding efforts by the team of investigators. Further, FA leaders refused to comment or respond to the data when confronted, despite efforts of the Indiana State Board of Health to offer assistance and recommend appropriate control measures.

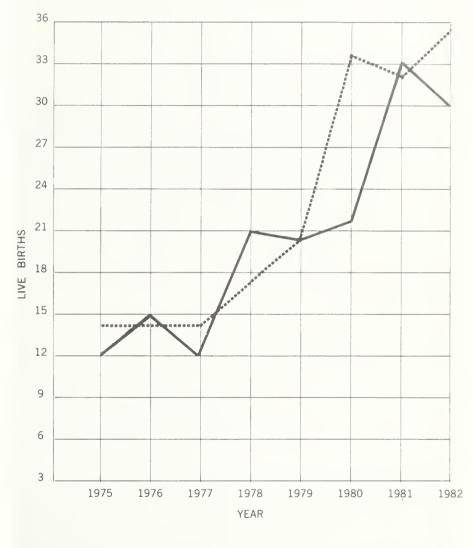
The moral-ethical dilemma of spiritual treatment of seriously ill adults, including expectant women, is not addressed in this study. The selection of traditional medical care will always remain a fundamental, personal choice based upon one's priorities and commitments.

With heightened public concerns for the neglected and/or abused child, however, the inevitable conflict between "church and state" will surface. What constitutes medical neglect of dependent children? At what point do parents have the privilege to deny their offspring contemporary treatment which could spare a suffering infant or child disability or death?

Such questions deserve further discussion, not only as a dynamic, social concern, but as a public health issue as well.

FIGURE 1

Faith Assembly Live Births, Kosciusko and Elkhart Counties, 1975 through 1982



KOSCIUSKO -----

Paraganglioma in the Duodenum

Report of a Case with Review of the Literature

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Abstract

A case of paraganglioma of the duodenum is reported, and the literature is reviewed. The histologic appearance consists of epithelioid nests, together with gangliocyte-like elements. Ultrastructurally, the cytoplasm of some cells contained dense-cored granules. Among the reported cases, gastrointestinal bleeding is the most frequent clinical manifestation. Radiographic examination of the upper gastrointestinal tract demonstrated a polypoid lesion in the vast majority of the patients. Local excision of the tumors seems to be the therapy of choice.

Key Words

Paraganglioma, duodenum, non-chromaffin

PARAGANGLIOMAS are neoplasms of neural crest origin arising in chromaffin and chemoreceptor tissue, and rarely involve the duodenum. These tumors encompass a type spectrum ranging from nonchromaffin paraganglioma¹ and gangliocytic paraganglioma² to ganglioneuromas. Since the description of a case of ganglioneuroma of the duodenum by Dahl and associates in 1957, nearly 21 neurogenic tumors have been reported in the literature. We herein describe an additional case and review the literature.

Case Report

A 65-year-old white woman was admitted to Broadway Methodist Hospital in December 1981 because of epigastric pain. Past history revealed that she had



FIGURE 1: Roentgenograms of gastrointestinal tract showing a polypoid lesion in the third portion of the duodenum.

had total hysterectomy and bilateral salpingo-oophorectomy. Physical examination was essentially negative. Laboratory data, including chemistry profile and hemogram, were all within normal limits. As part of the work-up for her abdominal pain, roentgenography of the upper gastrointestinal tract was performed. A small hiatal hernia and a 2.5 x 1.5 cm polypoid lesion in the third portion of the duodenum were found (*Fig. 1*). Laparotomy was performed and the polypoid tumor was removed.

Pathologic Findings: On gross examination the tumor was rubbery, vellowish gray and measured 2.5 x 1.5 x 1.5 cm. It was not encapsulated, but well demarcated from the normal surrounding tissue. In sections stained with hematoxylin and eosin, the tumor was composed largely of oval and fusiform epithelioid cells, arranged mainly in an organoid fashion (Fig. 2). The tumor cell nests were encircled by reticular fibers and were in close approximation to multiple blood-filled sinusoids, giving an appearance of "Zellballen" type arrangement in the carotid body tumor (Fig. 3). Occasional large ganglion cells were noted within the nests of epithelioid cells (Fig. 4).

Electron Microscopic Study: A. Material and Method: The tumor tissue in one of the paraffin blocks was deparaffinized, cut into small pieces and transferred to 30% buffered glutaraldehyde (pH 7.4), then post fixed in osmium tetroxide, dehydrated in a series of graded alcohol solutions, and embedded in epoxy resin (Epon®). One micrometer sections were cut and stained with Paragon® for section of ap-

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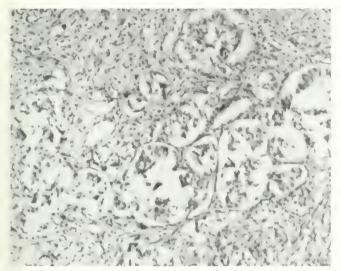


FIGURE 2: Organoid pattern of epithelioid cells forming main component of tumor (hematoxylin and eosin, X200).

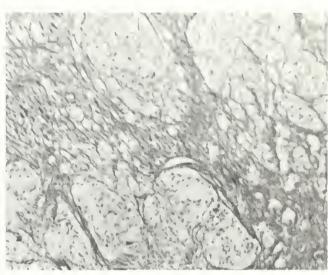


FIGURE 3: Reticulum stain showing the alveolar grouping and relationship to the vascular stroma (X200).

propriate blocks. Ultrathin sections were cut and stained with uranyl acetate and lead citrate. Multiple grids were examined with the Zeis EM-9-S-2 Electron Microscope.

B. Findings: There were some changes related to formaldehyde fixation and deparaffinization. The cytoplasmic organellae of the tumor cells were generally not well preserved. However, the nuclei and cytoplasmic boundaries of the tumor cells were still recognizable. The nuclei of the tumor cells were ovoid to spindle (Fig. 5). Some of the tumor cells were noted to have more eccentric nuclei and dense-cored granules in the cytoplasm (Fig. 6).

Discussion

Review of the literature revealed only 21 reported cases of paraganglioma in the duodenum. The detailed information of each individual case was not available on the nine cases published by Taylor and Helwig.¹ The clinicopathologic features of 12 cases and the present case are summarized in the *Table*. Of the 22 cases, the male-to-female ratio was 1.4 to 1; the ages of the patients ranged from 26 to 72 years, with a mean of 55 years; the tumors ranged from 1 to 7 cm in size, with a mean of 2.5 cm in greatest dimension. The most common location was in the second portion of the duodenum.

These polypoid tumors were unencapsulated, distending the overlying mucosa and extending into the muscularis.

Gastrointestinal bleeding was the most frequent clinical manifestation in the series reported by Taylor and Helwig.¹ It was present in six of seven patients on whom this information was available. Four of their patients also complained of epigastric pain described as typical of that of peptic ulcer. Of the 13 cases in the *Table*, eight patients had

gastrointestinal bleeding in the form of hematemesis, melena, or positive guaiac test on the stools; nine patients had abdominal pain or discomfort. X-ray examination demonstrated the presence of the polypoid lesion in 17 of 22 reported cases. Follow-up information was available only on four patients, the longest of which was three years.

This tumor has histologic characteristics of both a ganglioneuroma and of a chemodectoma or non-chromaffin

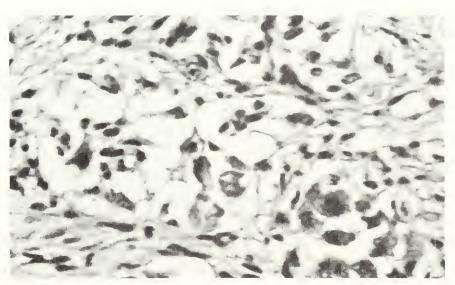


FIGURE 4: Large cells resembling ganglion cells are noted (hematoxylin and eosin, X400).

paraganglioma. It would seem that the ratio of these components varies from case to case. The gangliocytic elements of this tumor probably arise from Meissner's myenteric plexus. The origin of the paraganglionic elements remains

a mystery as they have never been identified in the normal duodenal wall. It seems entirely plausible that its origin could be from paraganglionic cells along the vagal fibers innervating the duodenum. Normal paraganglionic tis-

sues in various locations are becoming more evident as a result of their incidental discovery in surgical specimens and because investigators have intensified their search with the use of more sensitive techniques.³

			TABLE			
Reported	Cases	of	Paraganglioma	in	the	Duodenum

Case	Age/Sex	Size of Tumor	Location	X-Ray Findings	Chief Complaint	Follow-up	Reference
1.	35/M	4 x 3 cm.	Midportion of duodenum	Polypoid lesion	Mild epigastric	NA	(5)
2.	49/F	2.5 cm.		Polypoid lesion	4 episodes of tarry stools	NA	(5)
3.	61/M	2 x 1.5 x 1 cm.	2nd portion of duodenum	Negative	Intermittent right upper quadrant pain peptic ulcer	NA	(5)
4.	26/F	3 cm.	2nd portion of duodenum	Polypoid lesion	Epigastric pain; hematemesis and melena	NA	(5)
5.	42/M	7 x 3.5 cm	Descending duodenum	Polypoid lesion	Epigastric pain and tarry stools	NA	(5)
6.	70/F	3.5 x 3 x 2 cm.	3rd portion of duodenum	Polypoid lesion	Guaiac test positive on stools	In good health 2½ years after surgery	(6)
7.	46/M	4 cm.	4th portion of duodenum	Polypoid lesion	Weakness and dizziness, tarry stool	NA	(7)
8.	48/M	3 cm.	2nd portion of duodenum	Polypoid lesion	Hematemesis peptic ulcer	NA	(10)
9.	68/F	2 x 1.5 cm.	2nd portion of duodenum	Negative	Upper GI bleeding	No recur- rence 3 years after surgery	(4)
10.	61/M	5 x 2 cm.	2nd portion of duodenum	Polypoid lesion	Epigastic discomfort	NA	(4)
11.	43/F	1.4 x 1.0 cm.	3rd portion of duodenum	Polypoid lesion	Epigastic pain	No evidence of recurrence 14 M after surgery	(1)
12.	49/F	4 x 3.5 cm.	2nd portion of duodenum	Polypoid lesion	Epigastric pain	NA	(6)
13.	65/F	2.5 x 1.5 cm.	2nd portion of duodenum	Polypoid lesion	Epigastric pain	In good health 1 year after surgery	Present Case

NA = not available

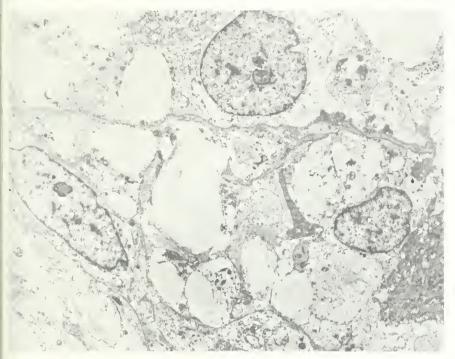


FIGURE 5: Electronmicrograph of tumor cells with ovoid to spindle nuclei. Some cells contained dense-cored granules in their cytoplasm (X6180).



FIGURE 6: Portion of cytoplasm containing dense-cored granules (X33250).

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EDITORIALS

AIDS Report

According to the Centers for Disease Control in Atlanta, so far, no cases have been reported of transmission of acquired immune deficiency syndrome (AIDS) to medical care workers caring for AIDS patients. Some women and children living in close contact with atrisk patients have developed the disease, but no medical attendants. Cause of the condition has been suggested as either life-style behavior or an unidentified viral agent. New observations raise the supposition that both may be involved synergistically.

Changing Times: A Need for Adaptability

"Anyone who has practiced medicine during the past decade—anyone who has been a patient during that time—must know that the American health care system is changing rapidly and radically. Progress in science has revolutionized the practice of medicine. Drugs, tests and treatments commonplace today were not known a generation ago. Changes in social attitudes and in the economy have had as great or greater impact."

The above is the opening paragraph of a learned essay by Sylvan Lee Weinberg, M.D. in his book entitled, An Epitaph for Merlin and Perhaps for Medicine.

Dr. Weinberg refers to the now well known publication² by Paul Starr, a Harvard sociologist. Starr's work is devoted to evolutionary changes in medical practice in America since colonial days. Americans have gonc from highly self-reliant pioneers who avoided doctors whenever possible to an overwhelming horde which is overly dependent and, in part, visits a doctor for trivial reasons.

Changes have been so numerous and of such variety that many members of the profession are not fully aware of their existence. Many physicians, although aware, are not certain of the importance or insignificance of observed changes.

Some may be as trivial as the small symptoms and little worries that crowd our offices. Some may be menacing. Some may go away, others may require active correction. Some may not be curable, no matter what, and will have to be lived with. It, therefore, behooves the profession to study the changes, to correct those amenable to correction, and to adapt to those that can't be reversed.

One reaction to change that is taking place in a large and increasing phase is the active education of the public in the subjects of self-care, self-diagnosis, self-treatment and don't bother the doctor unless it is necessary. Some family practitioners conduct evening classes for their patients and teach these subjects. There is an increasing number of medical guides published to enlarge the public knowledge of hygiene, preventive medicine and the care of symptoms that will be gone tomorrow.

Many of the changes in medical practice are due to improvements in methods of diagnosis and in new treatments. As important and as life-saving as these improvements have proven to be they, naturally, have raised the cost of medical care. In fact, there is not enough money in the world to provide all the up-to-date modern treatment for Americans if they all had access to it without limitation.

The answer to this dilemma is prepayment in such organizations as Health Maintenance Organizations (HMO). Prepayment schemes, of all varieties, should be devised and encouraged. Problems should be solved and adaptability by patients and physicians should be hastened. It may be one of the best solutions to the high cost of care.

Other alphabetical practice plans have followed the HMOs. Some have minor variations and others, such as PPOs, are considerably different. It used to be that no young intern sought legal counsel before starting a practice. Now practically everyone who writes about PPOs strongly advises a good lawyer and plenty of advice before signing anything.

Adaptability seems to be the word of the moment and for a while into the future. All new practice plans were originated to accommodate some economic or social situation. Only time will tell which ones survive. All may survive to provide adaptability to local groups and local conditions. It has become more important for physicians to attend educational meetings on "new ways to practice" then to brush up on clinical matters.

Many of the practice changes will disappear with actual usage or will survive because they are necessary to compensate for social variations.

There is one change that will require concentrated attention by all physicians. It is a change that will not go away by itself. It is the one thing that will destroy the practice of medicine in all its glory unless it is recognized by everyone and is combatted with great energy.

It is a syndrome characterized in some practitioners who are long on high academic grades and technical knowledge but short on compassion, friendliness and interest in the patient, as a person. Such physicians specialize in interest in the disease and seemingly forget the absolute necessity of ministering to the patient's fears and worries while curing the disease.

A leading British physician is quoted as expressing his rule for proper medical care. As paraphrased he said: "The patient does not come to the doctor primarily for a diagnosis or for treatment. He or she sees the doctor for solace and comfort. Given a choice, most patients would rather die under the care of a kind, friendly and compassionate somewhat inept doctor than they would to recover under the care of the best doctor in town if he/she was cold, highly technical or unfriendly."

We should all study all the new gadgets and gimmicks inherent in medical practice in the current social and economic variations. With knowledge we will be able to adopt those new ways that make it possible to care for our patients more effectively. After we are familiar with the possible changes in practice, we should become acquainted with social and economic situations around us and adapt to conditions that cannot be changed.

Adaptability is the watchword of the present and the password to the future.

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CPR Training

Cardiopulmonary resuscitation teams trained for emergency functions by industries and companies should be retrained, refreshed and retested for competency on a more frequent schedule than is the custom.

An article in the Annals of Emergency Medicine states that companies tend to attempt training on too many employees. All CPR training should be thorough and repeated—poorly done CPR is as bad as none at all.

The number of trainees should be kept at a minimum, according to the article, in order to devote more time and energy to continuous training of a relatively few technicians.

Many Citizens Unhappy with Health Care System

"Most Americans have access to health care, but 28 million still having serious difficulty, according to Robert Wood Johnson Report."

The above is the headline of an abbreviated report of a national study made for the Robert Wood Johnson Foundation by Louis Harris Associates in 1982. The study was done, at least in part, as a comparison to a similar survey made by the same group in 1976.

Almost everyone interviewed reported that they had good access to medical care. However, 12% of Americans said they had serious trouble in obtaining care.

Also, most Americans believe themselves to be healthy, but almost a third of them believe that the health care system itself is "sick" and needs a complete reorganization.

The Foundation Report suggests that the 12% group may contain a large number of people who, in spite of available care, do not take advantage of it. As a matter of fact there are people like that. Another consideration is that, since 17.2% Americans move each year, there must be a fair share of the movers who do not immediately establish a medical contact even though it is available.

Practically all the statistics have improved since the 1976 survey. Differences in access between rural and urban

populations have nearly disappeared.

Despite the general policy of physicians and medical groups to care for the unemployed and the uninsured in recent years, approximately one million families in 1982 reported that at least one member of the family had been refused medical care because of inability to pay.

Since 1972 the rates of physicians visits and hospital admissions have increased in low-income families and almost matched rates in the well-to-do segment.

Black families are less likely than white families to obtain care when they need it. They are more dissatisfied with hospital emergencies and they rate their own health status less favorably. They, more than any other group, believe that the health care system should be rebuilt.

One in five Hispanic adults are among the Americans in most serious trouble.

Five population groups were identified as having the greatest difficulty obtaining care. They are the poor, the uninsured and those in families where the head of the household is unemployed, not in the labor force, or did not graduate from high school.

One strange finding was the unexplainable fact that, while almost all Americans felt they were in good health and were receiving satisfactory health care, there were 50 million Americans who stated the belief that the system "has so much wrong with it that we need to rebuild it completely."

Of course, some of these malcontents, if they go to heaven, will have the same attitude up there. However, that does not account for a large portion of the answers.

Survey information was gathered through telephone interviews with a sample selected to be representative of the total non-institutionalized U.S. population. A total of 6,617 interviews were completed.

Another viewpoint: It would be interesting and very probably profitable to repeat the survey by utilizing another set of representative persons, each of whom was interviewed face-to-face without a phone interposed.

The subject is personal—the survey should have been conducted personally. The answers might have been the same, but at least they would have been more credible.

The report must be taken seriously by by the profession. On the surface it appears to require the wisdom of a Solomon to remedy the situation. Another angle: The improvement between 1976 and 1982, if studied carefully, might lead to adoption of the actions, in vogue since 1972, which led to what improvement we have already accomplished.

Child Restraint Law

Protection of young children riding in autos has been a legal requirement since New Year's Day. Children from birth to age 3 must ride in a federally approved safety seat and children from 3 through 4 must be restrained by either a safety seat or seat belt.

Dr. Ronald G. Blankenbaker, state health commissioner, says that, after the critical early weeks of life for newborn babies, automobile crashes is the leading cause of death for children.

Without restraint in a collision, a child is propelled into the nearest hard object, at the same speed the car was traveling at impact.

Actual road tests have shown that it is impossible for an adult who is firmly belted in to maintain a grasp on a 10 lb. bundle when the auto hits an immovable object. This proves true even when the adult knows the collision is coming. It also is true at relatively slow speeds.

Last year there were more than two dozen children under the age of 5 killed in motor vehicle accidents in Indiana. Nationwide, some 700 such children were killed and 40,000 were injured in auto mishaps last year.

Many hospitals in Indiana and several other public-spirited organizations now rent infant safety seats. All hospitals should make sure that all newborns are properly protected during their first ride in the automobile.

This is a great law. No one should be able, rationally, to argue against it. It should enjoy a high percentage of voluntary compliance. Traffic monitors will be able to educate those who tend to ignore these safety measures. Families who live by it will grow up with the safety belt habit and with a penchant for safety seats for children older than five years.

EDITORIALS.

Caution and Review Are Surgical Essentials

It is common knowledge that the use of steroids is accompanied by slow healing, poor control of infection, intestinal ulceration and bleeding, as well as fluid and electrolyte problems.

Flaccid paralysis, although described as a rare side-effect of some cortisone derivatives, is not usually considered in a routine review.

Muscular weakness during cortisone therapy could be diagnosed as due to cerebral edema which might result in increasing the cortisone dosage in a patient exhibiting the paresis as a complication of cortisone.

The following is an abstract of a case report from: Kelley, Jack L.: Acute Steroid Myopathy, JISMA 65:747.

A healthy three-year-old boy was run over by a power lawnmower. He suffered a large wound of his left side, an open left chest, loss of several ribs, lacerated diaphragm, ruptured spleen, evisceration of abdomen, perforation of bowel, transected left ulnar artery and nerve and an oblique fracture of the ulna. He was alert and showed no evidence of shock on arrival at the hospital.

Chest x-ray, after an eventful surgical repair, showed evidence of fluid inspirated into his right lung. Solu-Cortef and an antibiotic were given intravenously.

He progressed well except for muscular weakness on the third day. Blood and spinal fluid laboratory findings were in normal ranges. Dosage of Solu-Cortef was increased to relieve possible cerebral edema. He was very weak on the fourth day and his abdomen became distended in spite of free passage of gas.

On the fifth day he was almost flaccid but was still alert.

Pharmacologic review of medications with a search of the literature for side effects revealed information that steroids are rarely, in fact very rarely, complicated by muscle weakness. Also that the 9-Alpha, Flouro-configuration is the most likely group and that methylprednisolone is the least likely to exhibit this effect.

Within eight hours after Solu-Medrol was substituted for the Solu-Cortef, there was evidence of muscular movement. The next day he was much better and in another day his muscles were normal. Thereafter, recovery was uneventful.

A prominent surgeon once said, "Caution is the watchword in surgery."

This bit of wisdom, of course, could be repeated by each and every specialist. The absolute inability to predict biological behavior with confidence produces caution and modesty in all physicians who practice medicine.

Caution and modesty in expectations are also indispensable features in biological research. These valuable qualities increase with experience and constitute attributes which characterize the accomplished clinician and the successful researcher.

This myopathy experience may be boiled down to a remark made recently by Dr. Kelley while discussing this most instructive case report: "When things are not going well, review the entire situation once more including medications."

Children and Fluoride

Fluoridation of some of the community water supplies and the use of fluoridated toothpaste have significantly reduced cavity formation in children. The effect, however, has not been complete.

Public health recommendations have included a plan to adopt a school-based program to include application of sealants to tooth surfaces, regular use of mouth rinse and tablets, and classroom dental education, in an attempt to improve the "no cavities" score.

A four-year study has just been completed. Results were released by the Robert Wood Johnson Foundation. The study involved nearly 30,000 school children in 10 sites across the country. Five of the sites were in communities with fluoridated water supplies, five did not add fluoride to their water.

The program was conceived by the American Fund for Dental Health of Chicago in conjunction with local sponsors in each of the 10 communities. The Rand Corporation did an independent

evaluation of effectiveness and cost.

Some of the findings:

- Dental decay rates in children have dropped sharply, apparently due to fluoride in food, water and toothpaste.
- A substantial proportion of children had no cavities. Only 20% of the children accounted for nearly 60% of all decay found.
- The costs of delivering simple as well as comprehensive regimens of preventive dental care were far higher than had previously been estimated, ranging as high as nearly \$55 per child per year.
- The presumption that schools are highly efficient sites for delivering dental services was not borne out. In fact, scheduling and other logistical difficulties were considerable.
- Sealants—plastic-like coatings used on the teeth most prone to decay—were the single most effective (and most expensive) preventive measure, accounting for reductions in decay of as much as 65%.

Dr. David E. Rogers, president of the Robert Wood Johnson Foundation, emphasized: "The findings of low rates of dental decay in most children is good news. The high rates in a relatively small proportion of children puts the rationale for broad-scale, public health-type cavity prevention programs in question. Instead, a strategy for targeting preventive services on the few children at high risk needs to be considered."

Dr. Rogers also suggests that, since the study validates the effectiveness of fluoridated community water supplies, all community water supplies should be treated. Also, if, for any reason, community fluoridation cannot be effected then, at a very small cost, school water supplies should be treated.

Community water supply fluoridation is not expensive—no more and usually less than \$1 per person per year.

Anyone who lives in a community with a fluoridated water supply, either by deliberate addition of fluoride or because the community water is naturally at or above effective fluoride content, will be surprised or worse to know that Los Angeles, San Diego, San Antonio and Tucson are among the major American cities without fluoridated water systems.

Language of the Future

Guest Editorial

As the American birth rate continues to decline secondary to the zealous efforts of the Zero Population Growth Missionaries aided by the Abortionists and the Planned Parenthood groups, our country faces a declining total population. As population of people or other species declines, it heads toward the endangered species list. Such would seem to be our approaching fate.

I see a phenomenon on the Southern horizon that alters that picture: the migration, to the North, of the Spanish-speaking Mexicans. There exists no nose count of the numbers of Mexicans who have moved across the border, but I have read of estimates as high as eight or ten million. Most of these are "illegal aliens." What does our paper-tiger government in Washington do about this? As clearly as I can see, it does a whole lot of *nothing* that is effective in stemming or reversing that situation.

My biological studies indicate that when two strains of organisms compete for space, and one strain is more fertile than the other, it is only a matter of time until the less-fertile strain becomes, for practical purposes, extinct as the more fertile strain dominates completely.

The U.S.A. seems to be making progress in this direction, aided by the courts that have decreed that bilingual instruction be provided in schools, in certain areas, that bilingual ballots be prepared in certain areas, and that bilingual interpreters be provided in certain hospitals and medical care facilities.

I hope that my grandchildren learn the Spanish language, because I believe that my great grandchildren will be more comfortable living in a Spanish-speaking nation if they are reared in a family that can speak and comprehend the majority language.

My crystal ball shows the U.S.A. becoming the biggest and most populous Spanish-speaking nation on earth.—L.A. Arata, M.D., Shelbyville

'Second Class' Patients

Guest Editorial

In the "wisdom" of the government to spend money more responsibly than the owner thereof, it is proposed by new tax amendment that personal physicians be required by law to be paid only what Medicare allows. Violation involves risk of criminal prosecution as penalty and through government's intimidation of the hospital—loss of staff privileges.

With new restrictions limiting the type and amounts of services allowable, if a CAT scan of a brain is needed (average cost \$600) to rule out a brain tumor, it will be predetermined that the scan may not be performed.

This legislation lumps our senior citizens into second class patients, with

no availability of special care or special attention if they so desire such services.

To be penalized by being required to pay all expenses, including those allowable for Medicare repayment, is an unfair loss of entitlement especially when the penalty is imposed because the patient and doctor agreed on certain plans for medical care.

How can a doctor be expected to give extra care if the law says he may only do the average allowable in the patient's behalf?

We should all write to our congressman. Don't let your high level of medical services become the Apple in the Garden of Eden.—C. Dyke Egnatz, M.D., Schererville

Moped Accidents

Mopeds are just like autos—the average age of moped drivers is 41 years—but the largest group of deaths, accidents and injuries occurs between the ages of 15 and 20 years. Head injuries occur in 30% to 35% of all moped accidents but in 75% of all fatal cases.

A study on the subject, according to an article in *Annals of Emergency Medicine*, indicates that riders not wearing helmets, when involved in accidents, are twice as likely to suffer head injuries and nine times as likely to be killed as compared with those who wear helmets.



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BRIEF SUMMARY

PRDCARDIA fed p - CAPSULES

PROCARDIA ted p. CAPSULES For Ira Use INDICATIONS AND USAGE I. Vasospastic Angina. PRID ART All ted plan in died for the acceptance of the plan and graphed to the impression of the plan and the plan a

If Chronic Stable Angina (Liassical Errort Associated Angina). PMOLAMULA is indicated for the management at this in Abbit angine, without associated angine, without evidence of vasospasm (patient), while the arrivable and introduced by the above as and or organic in trates who can util to erate those agent from in Stable angine, ethics as or ated angine PROCARDIA has been effective in controlled trials of up to eight week, duration in reducing angine frequency and increasing exercise tolerance but not mailtimist unstanded effectivenes, and evaluation of ring term safety in those patients are

emplete.
Introlled studies is small numbers of patients, uggest concomitant use of PROCARDIA and bordablins rig agent, may be beneficial in patients with chronic stable angina, but available information is not sufficient to predict with confidence the effects of concurrent treatment especially in patients with compoun code left vent router function or cardiac conduction abnormalities. When in traducing, uch concomitant therapy, are must be taken to monitor blood pressure closely since exact may obtain some an occur from the combined effects of the drugs. (See Warnings). CONTRAINDICATIONS. Known hyperesensitivity reaction for PROCARDIA.

WARNINGS: Excessive Hypotension. Although in most patients, the hypotensive effect of PRICHARD A sin destination with the patients and poorly to erated hypotension. These responses have usually occurred during initial firation or at the time of subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta. Occident

subsequent upward dosage adjustment, and may be more likely in patients on concomitant beta to ockers. Severe typotes, an and or iccreased that of volume requirements have been reported in patients series in gPROCARDIA tragether with a beta blocking agent who underwent coronary artery bypass urgery. I say high dose tentany appears to be due to the climb had on in PROCARDIA and a beta blocker but the possibility that it may occur with PROCARDIA alone, with ow doses of tentany in other surgical procedures or with other narcotic and less of a land to the ruled out. In PROCARDIA treated patients where surgery using high dose tentary anesthesia, scontemplated, the physician should be aware of these potential problems and I the patient's condition permits, sufficient the rail least 36 hours; should be allowed for PROCARDIA for be washed out of the body prior to surgery.

Increased Angina, Occasional patients have developed well documented increased frequency duration in severity tit angina on starting PROCARDIA or at the time of dosage increases. The mechanism of this response is not established but couried result from decreased coronary perfusion assint ated with decreased diastonic pressure with increased heart rate, or trom increased demand resulting from increased heart rate alone.

Beta Blocker Withdrawal. Patients recently, withdrawn from beta blockers may develop a with stawal syndrome with increased angina probably related to increased and might be expected to exacerbate if by provoking refex catedio, mine release. There have been occasional reports of to respect and increased angina in a setting of their bioticker withdrawal and PROCARDIA treating of the bioticker withdrawal and PROCARDIA treating of the provisional reports of the respect of the provisional reports of t

to taper beta b ockers if possible irather than stopping them abruptly before beginning

Congestive Heart Failure Rarey, patients, usually receiving a beta blocker, have developed heart talling after beginning PROCARDIA. Patients with light aortic stenosis may be at greater risk for

PRECAUTIONS General Hypotension Because PROCARDIA decreases peripheral vascular action and titration

Compestive new PROCARDIA Patients with light aortic stenosis may be at greater risk for such an event.

PRECAUTIONS General Hypotension Because PROCARDIA decreases peripheral vascular resistance, and the processor of the procause processor of the procause processor of the procause processor of the procause processor of the proc

Iterature

HOW SUPPLIED: Each orange soft gelatin PROCARDIA CAPSULE contains 10 mg of intediprine

PROCARDIA CAPSULES are supplied in bottles of 100 (NDC 0069-2600-66) 300 (NDC 00692600-72) and unit dose (10x10) (NDC 0069-2600-41). The capsules should be protected from
ght and moisture and stored at controlled room temperature 59- to 77 F (15- to 25 C) in the manutacturer's original container. More detailed professional information available on request c 1982 Pfizer Inc



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2) Angina where the clinical presentation suggests a possible

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3) Chronic stable angina without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or nitrates or who cannot tolerate these agents. In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks' duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.



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WHAT'S NEW?

CONTINUED FROM PAGE 160

Ross Laboratories announces ENRICHTM Liquid Nutrition with Fiber. It is the first complete, balanced medical nutritional formula with added fiber. It comes in a can, ready to use. It was designed for patients who do *not* require a low-residue feeding and who could benefit from the addition of fiber to the diet. Useful as oral supplement or as a tube feeding. Has 260 calories per 8 ounces. Vitamin and mineral levels in six cans (1,560 calories) meet 100% of the US RDA.

Mead Johnson announces NATURACILTM, a chewable bulk high-fiber laxative with a pleasant taste. Each dose contains 3.4 grams of natural fiber from psyllium. Only 14 mg of sodium per dose and only 54 calories. The dosage is two pieces with 8 ounces of any liquid one to three times daily.

The latest in transtelephonic transmitters for monitoring physiologic pacemakers has been designed and manufactured by Instromedix. The A+V Pacemaker Data Transmitter is used specifically with A-V sequential pacemakers, but will monitor single chamber pacemakers as well. A single switch allows the patient to transmit either the pacemaker pulse width artifact or the ECG. This choice permits physicians who monitor dual chamber pacemakers to display the atrial and ventricular spikes or a pure ECG which is not obscured by the pulse width artifacts.

A cost-effective, table-top, real-time diagnostic ultrasound system designed for the small hospital or clinic has been introduced by Philips Medical Systems. Designated SDR 1500, the new unit is 11½ " high, 20" wide and 30" deep. It

weighs 75 pounds. The fully computerized system incorporates a microcomputer "bus" with a central processing unit, program memory, and two separate ultrasound image memories for improved control and processing of data.

Deloitte Haskins & Sells of New York City is installing its new case mix management system in 27 hospitals, including The Presbyterian Hospital in New York City. The system grew out of the firm's experience as consultants to New Jersey's DRG program. The DH&S system helps hospitals to analyze and monitor their performance under TEFRA and PPS. In addition to Medicare, it enables hospitals to track patients across all payors (Blue Cross, Medicaid, and HMOs). It may be run through a time-sharing system or on a hospital's own equipment.

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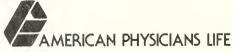
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AUXILIARY REPORT

Hulda Classen (Mrs. Peter) President, ISMA Auxiliary

The 40th annual ISMA Auxiliary convention will be held Tuesday through Thursday, April 24-26, at the Midway Motor Lodge, 300 S. Main St., Ełkhart. The House of Delegates will convene at 8:45 a.m., Wednesday and at the same time Thursday.

A dinner to honor former Auxiliary presidents will be held Tuesday evening at the Christiana Country Club. Judy Koontz of Vincennes will be installed as president at a luncheon Thursday following the House of Delegates meeting. The outgoing president, Hulda Classen, will be honored at a banquet Wednesday

evening at the Elcona Country Club. In conjunction with the banquet, for which spouses are invited and urged to attend, an auction to benefit the AMA-ERF fund will be conducted.

The House of Delegates keynote address will be delivered by Billie Brady of Greenville, S.C., president-elect of the AMA Auxiliary. Mrs. Brady, a mother of four and an Auxilian for 27 years, will offer advice on ways to strengthen the Auxiliary without stifling its creativity.

Special features this year will include a Wednesday luncheon hosted by the St.

Joseph County Auxiliary, highlighted by entertainment provided by the Clay High School Swing Choir. Also on tap Wednesday afternoon will be an "Elkhart Sampler," arranged by the hosting Elkhart County Auxiliary. The "sampler" will feature a gathering of local artisans and a display of their wares.

The complete agenda and reservation form will appear in the spring issue of the Auxiliary publication, *The Pulse*. For more information or details concerning the convention, contact Carole Thomas at (219) 264-0068, Elkhart.

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BOOK REVIEWS.

Medicine for the Practicing Physician

J. Willis Hurst, M.D., editor-in-chief. Copyright 1983, Butterworth Publishers, Woburn, Mass. 1,969 pages, hardcover, \$80.

This text, composed by approximately 100 contributors, is a fitting companion to Hurst's comprehensive volume, The Heart. Each of the 26 chapters has a separate editor; the subtopics usually are covered by other individuals, though some authors write on more than one topic. The material is presented in what to the editor appears to be the most logical plan for learning. The order of presentation on every disease listed is 1) criteria for diagnosis, 2) clinical presentations, 3) plans-diagnostic, therapeutic education (for the family of the patient), 4) follow-up, 5) discussion, including background information such as basic science, natural history, cost containment. Under "diagnostic plans" the editor states that discussion of differential diagnosis is not needed if the subjective and objective data are pathognomonic for a specific entity. If insufficient clues are not recognized for diagnosis "the authors have listed, usually in tabular form, the diagnosis to be considered and the diagnostic tests or observations needed to establish their preserve."

How well this rigid compartmentalization serves the practicing physician is open to question. A topic chosen at random by this reviewer was "encephalitis." In the index the sub-heads were "allergic," "cytomegalovirus infection," "headache due to," "influenza," "measles," "inumps," "viral." The cytomegalovirus section offered little help. Then the reference for "viral encephalitis" was looked up. The heading of the pages found proved to be "herpes simplex virus (HSV) infection." Under the sub-heading "clinical manifestations" 10 lines each were found under "subjective and objective."

Brain biopsy for diagnosis is correctly mentioned as the most accurate method of diagnosis of herpes encephalitis. Other forms of herpes virus infections were given more space. No mention was made of other entities such as

cerebral granulomas, fungus and mycotic meningitis, neoplasms, brain abscess, etc. to be ruled out before this step was taken. A-B-D Arabanofuranosyladenine is mentioned as useful if administered intravenously early in the course of encephalitis, without elaboration. One wonders whether the author of this section ever struggled with cases of rapidly advancing encephalitis.

In another chapter picked at random, this time on hyperthyroidism, a very helpful tabular form of differential diagnosis is presented. Obviously, this large volume, edited by a distinguished physician, contains a wealth of useful clinical information but the usefulness of the various sections is not uniform. Its rigid compartmentalized style will "turn off" some old timers like this reviewer. It makes us yearn for concise, down to earth, pleasantly readable, yet authoritative accounts of disease such as Osler in the past and many English authors of the present have produced so well.

Paul S. Rhoads, M.D. Richmond Internal Medicine

The Cancer Survivors and How They Did It

By Judith Glassman. Copyright 1983, Doubleday & Co., Inc., (Dial Press), Garden City, N. Y. 414 pages, hardcover, \$17.95.

The author states that there are "orthodox" and "alternative" therapies for cancer. The former are those espoused by the American Cancer Society and scientific medicine while the others are those on the "List of Unproven Methods" of the American Cancer Society. Three quarters of the book are devoted to, shall we say, less than scientific cancer therapies.

There are nine chapters on nutritional therapies, Harry Hoxsey, Max Gerson, immune therapies and psychologic factors in cancer. Only Chapter 2 gets into traditional methods. The entire text is replete with anecdotal stories of survivors, which are fascinating. It seems that, at times, any therapy may cure cancer. Perhaps the biological nature of the cancer is after all the most important factor.

Essentially, the author is writing history here and that factor makes her narrative worth reading. Taken as a medical textbook, it partakes of the nonsense we sometimes associate with such books by laymen. We can even feel embarrassed by such authors.

She makes a salient point though, in the fact that traditional or orthodox methods are an assault on the cancer which pay little or no heed to the organism harboring the neoplastic cells. We can learn from these empiricists to remember to treat the whole person. A corollary is that nutritional factors are undoubtedly important in prevention of cancer. We have only to remember the literature accumulating on such effects from analogues of Vitamin A and the mineral selenium. Conversely, we know of the high incidence of breast and colon cancer in persons (the average American) ingesting excess dietary fat.

This author did a profound amount of homework to create her book. It is a fund of information and a useful overview of what some of us were prone to call "quack medicine." We need to see all sides of the cancer problem. The only cavil is that we must fight against anything harmful to the patient such as the "macrobiotic diet." A recent communication was received from the Indiana State Health Commissioner stating that "... there is no evidence that it is a successful treatment for cancer." Our author here cites a "cure" from macrobiotics on Jean Kohler, a pianist and professor of music at Ball State in Muncie, Indiana. Eventually, though, he died because his diet had become too "yang" (see page 175). Thus is the medical reader embarrassed.

> Rodney A. Mannion, M.D. LaPorte Urological Surgery

Thieme-Stratton has a new book, second revised edition, by Klaus Heilman, M.D. The title is *Rate-Controlled Drug Delivery: Concept and Development*. Dr. Heilman explains the basics of the system and its clinical uses. 147 pages, 62 figures, 17 tables, \$25.

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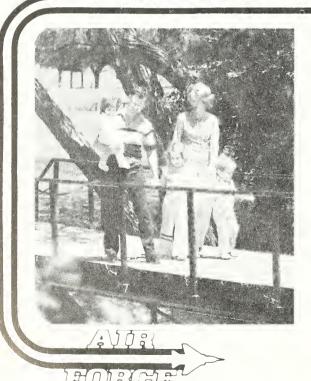
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CME QUIZ

TO OBTAIN ONE HOUR OF CATEGORY I AMA CME CREDIT, answer the following questions by circling the correct answer on the answer sheet below. Complete and clip the application form and mail it to: Indiana University School of Medicine, CME Division, Fesler Hall 224, 1120 South Dr., Indianapolis 46223.

Child Abuse

CONTINUED FROM PAGES 169-173

- 1. If you are examining a child and suspect abuse but cannot prove it, you should:
 - a. Ask to see the child back in 2 weeks to examine again for signs of neglect or abuse.
 - b. Question the parents thoroughly about their care of their child.
 - c. Report it as a case of child abuse.
 - d. Ask for a consultation from another physician.
- 2. If the parents refuse to have photographs taken in a case of suspected child abuse, you should:
 - a. Abide by their wishes and don't take the photographs.
 - b. Take the photographs without their knowledge.
 - c. Take the photographs.
 - d. Don't take the photographs unless a judge gives you permission to do so.
- Who should report child abuse in a community?
 - a. Those persons most educated about child abuse, e.g. physicians, lawyers, teachers

- b. Personnel employed by public or county hospitals.
- c. A lay person should notify a physician to report it.
- d. Anyone who suspects child abuse must report it.
- What does immunity from liability mean when a person reports a case of suspected child abuse?
 - a. The person cannot be sued for libel, defamation, or slander if after the investigation there is no evidence of maltreatment.
 - b. The person is reporting the case of suspected abuse presumably in good faith and, therefore, cannot be sued for libel, invasion of privacy or defamation.
 - The person reporting is protected both from civil and criminal liability.
 - d. All of the above.
- There will be a decrease in child abuse and neglect when
 - a. We have stronger child abuse laws.
 - b. We make more severe laws for per-

- sons who neglect or abuse children.
- c. We make more severe laws for persons who fail to report child abuse.
- d. Our society works for prevention through healthier family and community life.
- 6. Abuse would be suspected when a child
 - a. Unexplained injuries or injuries inconsistent with the history.
 - b. Numerous bruises of various ages over many areas of the child's body.
 - c. Cigarette burns or scars in the shape of cord loops on their skin.
 - d. Been kept at home for a while before seeking medical aid for the injury.
 - e. All of the above.
- 7. Radiographs are helpful in child abuse because:
 - a. They may show multiple old fracture
 - b. Injuries will show up immediately on radiographs.
 - Specific injuries in the young infant, such as the epiphyseal-metaphyseal fracture are almost pathognomonic of child abuse.
 - d. a and c are correct.
- 8. In filing a case of suspected child abuse
 - a. The local child protection service should be notified immediately once the diagnosis is suspected, and in writing within 48 hours.

CONTINUED ON NEXT PAGE

FEBRUARY CME QUIZ **Answers**

Following are the answers to the CME quiz that appeared in the February 1984 issue: "The Medical Treatment of Cardiac Failure Due to Acute Myocardial Infarction," by Eric S. Williams, M.D.

 c 2. d 7. c 3. d 4. b 9. a b 10.

Answer sheet for Quiz: (Child Abuse . . .)

1. a b c d 6. a b c d e 2. a b c d 7. a b c d 3. a b c d 8. a b c d 4. a b c d 9. abcde 5. a b c d 10. a b c d

I wish to apply for one hour of category 1 AMA Continuing Medical Education credit through the I.U. School of Medicine. I have read the article and answered the guiz on the answer sheet above. I understand that my answer sheet will be graded confidentially, at no cost to me, and that notification of my successful completion of the quiz (80% of the questions answered correctly) will be directed to me for my application for the Physician's Recognition Award of the American Medical Association. I also understand that if I do not answer 80% of the questions correctly, I will not be advised of my score but the answers will be published in the next issue of INDIANA MEDICINE for my information.

Name (please print or type)

Address

Identification number (found above your name on mailing label)

Signature

To be eligible for this month's quiz, send your completed, signed application before April 10, 1984 to the address appearing at the top of this page.

NEWS NOTES

License Renewal Time

The Medical Licensing Board of Indiana will mail notices in April for license renewal fees due June 30. The renewal fee is \$40, although a penalty fee of \$200 will be assessed if the renewal is not accomplished by Aug. 31.

Physicians who have moved since last receiving a renewal registration form should notify the Medical Licensing Board of their new address. Failure to renew will render a license to practice medicine invalid.

The Medical Licensing Board is located at 924 N. Pennsylvania, Indianapolis 46204—(317) 232-2960.

Proctology Academy Here

The international headquarters and executive offices of the International Academy of Proctology has moved to accommodations at the site of the Kendrick Memorial Hospital in Mooresville. Dr. George A. Donnally is serving as executive director. The Annual Teaching Congress of the Academy will meet in Indianapolis on May 2 to 5.

NMR Diagnostics

The new diagnostic technology, nuclear magnetic resonance (NMR), is able to differentiate between closely related soft tissues and can detect early pathological changes induced by disease. It uses magnetic fields, produced by superconducting magnets and radio wave

energy to produce cross sectional images of the human anatomy.

The superconducting magnets produce magnetic forces 3,000 to 25,000 times greater than those of the earth's poles. Liquid helium, at a temperature of minus 452 °F, is required to cool the magnets to eliminate their electrical resistance and produce superconducting properties.

NMR is still under study for approval by the FDA. It is predicted that the process may prove to be superior as a diagnostic technology to CAT scanners and x-ray. If so, the number of NMR machines will be substantial and, as a result, the supply of helium will be critical. Helium is one of the most common elements in the universe, but it is decidedly uncommon on earth. It is recovered from natural gas and comes from some underground wells mixed with nitrogen.

The industry predicts that, in the future, all supplies of helium will be subject to very careful conservation.

CHAMPUS News

Clinical social workers can provide mental health services under CHAMPUS without having to be referred or supervised by physicians. Clinical social workers have been paid directly since 1980 under a test program authorized by Congress. The policy was made permanent when the policy was found to be advantageous to patients and the government.

CME Quiz ...

CONTINUED FROM PAGE 207

- b. Don't tell the parents. They may get angry with you.
- c. If the parents tell you something in confidence, don't report it.
- d. You must do all the reporting yourself, written and oral. A social worker or nurse may not help.
- 9. Child abuse risk factors include:
 - a. Unwanted pregnancies.
 - b. Parents who have been abused as children.
 - c. Families with financial problems and or unemployment.
 - d. Child unable to live up to parents expectations, either because of han-

- dicaps or because expectations are unrealistic.
- e. All of the above.
- 10. Burns are frequently signs of child abuse. Which of the following is correct?
 - a. Immersion burns with a "glove" distribution are a definite sign of
 - b. The depth of a burn is helpful in determining if there is abuse involved.
 - c. The distribution of the burn is helpful in determining if the burn is accidental or deliberate.
 - d. a and c are correct.

New 'Medical College'

Some Britishers have decided that there is a gap between physicians and patients—an information gap. To remedy the gap and improve health knowledge a new "College" has been formed.

Analagous to The Royal College of Physicians and the American College of Family Practice, the new organization is called The Royal College of Health and is composed of medical laymen. Their magazine is titled *Self Health*.

As reported in *Medical World News*, the first issue contains articles on alternative medicine. Patient participation groups are encouraged. Also, there are several pages on self-help groups, recent developments in health care and medicine and new initiatives to promote health.

For the Asking . . .

Available to physicians for the asking are:

- "Perfusion and Function," an award-winning medical motion picture, is available on a free loan basis for cardiology group viewing. It features the work of 13 nationally renowned investigators trying to better understand coronary artery disease. The film, which received the CINE Golden Eagle Award, comes in 16mm, ¾" U-matic, VHS or Beta II. Contact SK&F Health Media Center, c/o RHR Filmedia, 9 E. 38th St., Suite 1103, New York, N.Y. 10016—800-223-2342.
- "NutriSEARCH from Nestle," is a new computerized database of more than 1,000 abstracts of significant research in the fields of maternal and infant nutrition. Developed by the Nestle Corporation, the database will provide doctors, scientists, students and medical writers with comprehensive listings of materials pertinent to their research needs. The service is activated by completing a NutriSEARCH Request Form, obtainable from Nestle. A compilation of abstracts in the specific research area is provided. A review summary of the content and key conclusions of each abstract will be sent to the researcher. Call Nestle at (202) 775-0180.

Here and There . . .

- named Indianapolis Man of the Year by the *Indianapolis Star*; he is head of the Methodist Hospital team that performed several heart transplant operations since October 1982.
- ... Dr. Mathias S. Mount of Bloomfield, 80, has retired from practice after serving the community 54 years.
- for clinical affairs at the I.U. Medical Center and chief of the renal division, has won the 1983 Martin Wagner Memorial Award for his work with the National Kidney Foundation, of which he was one of the founders.
- contributions to the economic development of Clark County' by creating 1,500 jobs with a payroll of over \$20 million.
- ... Dr. Sjoerd Roggeveen of Kentland discussed cancer during a recent meeting of the Kentland Rotary Club.
- ... Dr. Walter W. Rudzinski of Valparaiso has been elected to fellowship in the American College of Surgeons.
- ... Dr. Wallace R. Van Den Bosch of Bluffton was a guest speaker at a recent seminar on alcoholism at the Caylor-Nickel Clinic and Hospital.
- ... Dr. Gerry M. Hippensteel of Vincennes has been named to the board of directors of American National Bank.
- ... **Dr. Ronald K. Andrews** of Greenfield has been appointed as an advisor to the U.S. Congressional Advisory Board on Military Affairs.
- Evansville has been appointed director of medical services of the Mead Johnson Pharmaceutical Division.
- ... Dr. Rolando I. Haddad of Jeffersonville discussed drug and alcohol abuse at a December meeting of the Chemical People Task Force of Clark County.
- ... Dr. James W. Renne of Evansville discussed scoliosis during a December public meeting at the Welborn Wellness Center.
- ... Dr. Jon D. Van Scyoc of Noblesville has been re-appointed to a

- four-year term with the Hamilton County Board of Health.
- Auburn has been named chief of the medical staff, DeKalb Memorial Hospital, succeeding Dr. Wallace B. Carruthers.
- Franklin has been re-elected chief of the medical staff at Johnson County Memorial Hospital; Dr. Chandrabhan Singh was elected secretary.
- ... **Dr. Richard L. Need** of Beech Grove has been named director of medical education at St. Francis Hospital.
- ... Dr. Donald G. Mason of Angola has been elected president of the medical staff, Cameron Memorial Community Hospital; Dr. R. Wyatt Weaver is vicepresident, and Dr. Ted J. Crisman is secretary.
- ... **Dr. Calvin N. Steussy** of New Castle has been elected president of the Indiana Association of Pathologists.
- ... **Dr. Warren K. Reiss** of Culver has been elected president of the Marshall County Parkview Hospital board of trustees.
- ... **Dr. David K. Johntoz** of Bloomington addressed the January meeting of the Bloomington Area Chapter of the United Ostomy Association, for which he serves as medical advisor.
- has been elected chief of the medical staff at Decatur County Memorial Hospital; Dr. Ricardo C. Domingo is vice-chief of staff, and Dr. William R. Shaffer is secretary-treasurer.
- ... Dr. Jeffry C. Rendel of Jasper discussed arthritis during a recent public education program sponsored by Memorial Hospital, Jasper.
- ... **Dr. Alfred E. Hollenberg** of Hagerstown has been named director of ambulatory medicine at Reid Memorial Hospital, Richmond.
- ... Drs. Clarence E. Ehrlich and Robert E. Rogers, Indianapolis, recently helped administer the oral examinations of the American Board of Obstetrics and Gynecology in Chicago.
- ... **Dr. Otis R. Bowen** of Indianapolis has been appointed to the Fairbanks Hospital board of directors.
- ... Dr. Hanus J. Grosz of Indianapolis has been inducted into

- membership in the American Academy of Clinical Psychiatrists.
- ... The Vanderburgh County Medical Society staged its third annual two-day Health Fair last month in Evansville's Eastland Mall.
- ... Dr. Harold G. Benedict of Anderson has been elected president of the medical staff at St. John's Medical Center; Dr. Paul L. Ramsey is vicepresident, and Dr. James R. Drake is chief of staff.
- ... Dr. Thomas G. Gaylord of Martinsville has been elected chief of the medical staff at Morgan County Memorial Hospital; Dr. George J. Ostheimer is vice-chief of staff.
- ... Dr. Victor H. Muller of Indianapolis, Dr. Jane M. Irmscher of Fort Wayne, and Dr. Mohammed Hussain of Jeffersonville have been appointed by Governor Orr to the Indiana Hemophilia Advisory Committee.
- ... **Dr. Michael J. Mirro** of Fort Wayne spoke to the Wabash Rotary Club in January about coronary heart disease.
- ... **Dr. James A. Hall** of Logansport has been elected to membership in the Central Association of Obstetricians and Gynecologists.
- ... Dr. Larry W. Sims of Evansville participated in a "Health Matters" TV program dealing with drunk driving; the half-hour program, produced by WNIN-Channel 9, aired in December.
- has been inducted as a fellow of American College of Surgeons.
- ... Dr. Rafik S. Farag of Peru has been elected president of the Dukes Hospital medical staff; Dr. Maurice D. Sixbey is vice-president, and Dr. Agnes M. Kenny is secretary.

AAFP Membership Profile

The American Academy of Family Practice has released a profile of its active membership. Despite the general impression that solo practice is fast disappearing, the academy reports that more than 43% of its members as represented by 31,465 of the 54,880 total are in solo practice. More than 51% of its office-based members are solo. Academy members who work on a straight salary add up to more than 15%.

NEWS NOTES

New ISMA Members

The following physicians were welcomed in January as new members of the Indiana State Medical Associaton:

Ahmad S. Ahmadzai, M.D., Highland, internal medicine.

C. Kurt Alexander, M.D., Evansville, internal medicine.

George L. Baker, M.D., Evansville, pediatrics.

Robert D. Barnes, M.D., Evansville, family practice.

David W. Beahm, M.D., Anderson, pediatrics.

Daniel R. Berner, M.D., Lafayette, otorhinolaryngology.

J. M. Botero, M.D., Elkhart, pathology.

Jeffrey P. Brown, M.D., Muncie, internal medicine.

Jean W. Carter, M.D., W. Lafayette, obstetrics and gynecology.

Dennis M. DeRosa, M.D., Fort Wayne, emergency medicine.

John R. Dimar, M.D., Fort Wayne, orthopedic surgery.

Gary A. Fitzgerald, M.D., Terre Haute, family practice.

Roy P. Germano, M.D., New Albany, emergency medicine.

Darius Ghazi, M.D., Louisville, Ky., orthopedic surgery.

James W. Hansen, M.D., Evansville, pediatrics.



Kenneth Hoff, M.D., Rochester, family practice.

Phillip M. Johnson, M.D., New Albany, family practice.

Pravin M. Karia, M.D., Jeffersonville, anesthesiology.

Ronald E. Leach, M.D., Indianapolis, emergency medicine.

John E. Mann, D.O., Elkhart, family practice.

Elizabeth Mateos-Tiongco, M.D., Lyons, obstetrics and gynecology.

Dennis R. McClain, M.D., Jeffersonville, emergency medicine.

Martha J. Mechei, M.D., Muncie, unspecified.

Lydia K. Mertz, M.D., Muncie, family practice.

Hester J. Muller, M.D., LaPorte, radiology.

Stephen H. Pennal, M.D., 1ndianapolis, family practice.

Dirk T. Pruis, M.D., Fort Wayne, orthopedic surgery.

Jamie G. Ramos, M.D., Rochester, family practice.

Stuart A. Robertson, M.D., Jeffersonville, emergency medicine.

Julie R. Schleck, M.D., Lafayette, internal medicine.

Kurt J. Schleck, M.D., Lafayette, internal medicine.

Edward O. Schroeter, M.D., Jeffersonville, emergency medicine.

Jerry E. Sheward, M.D., Indianapolis, psychiatry.

William J. Tuley, M.D., Evansville, family practice.

Abdurrahman Unal, M.D., Terre Haute, therapeutic radiology.

Physician Recognition Awards -



Ahler, Kenneth J., Rensselaer

Bajpai, Deepchand, Fort Wayne

Ball, Margaret J.H., Fort Wayne

Bolinger, Garry L., Indianapolis

Daniels, Daniel B., Indianapolis

Baker, Glenn W., Brownsburg

Bisson, Kenneth A., Angola

Bradley, Louis F., Bluffton

Daniel, Gerald O., Anderson

Divcic, Borivoj S., Valparaiso

The following ISMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned, and is acceptable proof in most states requiring CME in re-registration that the mandatory hours of CME have been accomplished.

Ellis, George M., Connersville Erenoglu, Ender, Highland Garcia, Enrico I., Clinton Goebel, C. William, Fort Wayne Guthrie, James U., Peru Jacoby, Michael, Logansport Kroh, C. Casey, Fort Wayne Laubscher, Clarence A., Evanville Lourie, Bernard, Evansville



Miller, James C., Greensburg
Peralta, Jose, Crawfordsville
Price, Francis W., Indianapolis
Roberts, Warren C., Indianapolis
Rogers, Marcus N., Bloomington
Samaddar, Prasoon K., Bedford
Sartore, Gilbert A., Evansville
Topper, Thomas E., Crawfordsville
Valenzuela, Roberto D., Merrillville
Wenzler, Paul J., Bloomington

Ear Institute of Indiana

Drs. J. William Wright, Jr., J. William Wright III and George W. Hicks, Indianapolis, have practiced under the designation of Otologic Associates, Inc. for many years. Although their practice has been and will be limited to diseases of the ear, their professional association has been renamed The Ear Institute of Indiana, Inc. The practice will continue at the same location, 5506 E. 16th Street. The new designation was adopted to represent their expanding area of practice and the professional and public educational concerns of the group.

Restrictive Covenant OK

A restrictive covenant containing a provision for \$25,000 in liquidated damages for violation of the restriction was enforceable against a physician, the Indiana Supreme Court has ruled.

The physician became a partner in the 50-plus partnership on Jan. 1, 1972. Under the partnership agreement, he agreed not to compete within a 25-mile radius of Hammond, Ind., for two years after leaving the clinic. He withdrew

from the clinic July 10, 1974, and began to practice in the protected area. The partnership filed suit to recover the \$25,000 in liquidated damages. A trial court awarded judgment for the partnership, but an appellate court reversed.

On appeal, the Supreme Court reinstated the trial court's judgment for the partnership. The court said the covenant not to compete did not violate antitrust statutes and was not against public policy. The \$25,000 in liquidated damages was not invalid as a penalty in light of the enormity of the partnership's income and expense figures, the court said.—*Raymundo v. Hammond Clinic Association*, 449 N.E.2d276 (Ind. Sup. Ct., May 31, 1983)—*The Citation, Dec.* 15, 1983

Photography Contest

A scientific photography prize contest is being conducted by the American Society of Clinical Pathologists and the Eastman Kodak Company. Three entries in each of three categories, gross, microscopic and electron microscopic, may be submitted.

The contest is limited to medical/health-care professionals who are also scientific photographers. Deadline is June 1, 1984. Prizes in each category range from tops of \$500 to \$50 honorable mention.

For an official entry form, write to the ASCP at 2100 W. Harrison, Chicago 60612.

Cancer Research Award

The second annual \$100,000 Hammer Prize for cancer research for 1983 will be shared by four American scientists. Dr. J. Michael Bishop and Dr. Harold E. Varmus of the University of California, Dr. Raymond L. Erikson, Harvard University, and Dr. Robert A. Weinberg, Massachusetts Institute of Technology, are recognized for their work on oncogenes.

Oncogenes are present in the cells of all individuals but normally are inactive. When activated they cause cancer. The Hammer prize recipients demonstrated that oncogenes exist and how they become activated and cause cancer.

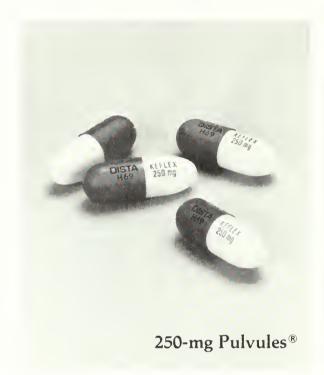
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Subjects to be covered include genetics; pediatric gastroenterology including specific digestion-absorption defects and metabolic hepatopathies and cholestatic syndromes of infancy and childhood; practical adolescent gynecology and office practice of adolescent medicine; pediatric infectious disease, and infant pulmonology. The banquet speaker will be Dr. Leon Rosenberg.

For full information contact Dr. Morris Green, 702 Barnhill Drive, Indianapolis 46223—(317) 264-7819.

Peripheral Vascular Disease

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To register for the symposium, which is free, write or phone the American Diabetes Association, P.O. Box 768, New York, N.Y. 10159—(1-800) 221-2207

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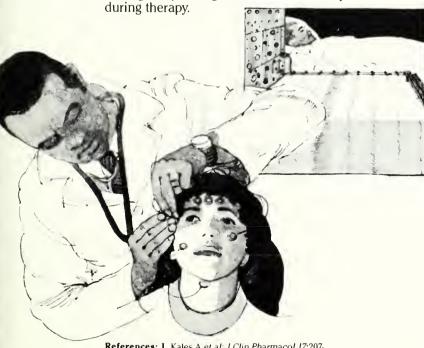
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References: 1. Kales A et al: J Clin Pharmacol 17:207-213, Apr 1977 and data on file, Hoffmann-La Roche Inc., Nutley, NJ. 2. Kales A: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 3. Zimmerman AM: Curr Ther Res 13:18-22, Jan 1971. 4. Kales A et al: JAMA 241:1692-1695, Apr 20, 1979. 5. Kales A, Scharf MB, Kales JD: Science 201:1039-1041, Sep 15, 1978. 6. Kales A et al: Clin Pharmacol Ther 19:576-583, May 1976. 7. Kales A, Kales JD: Pharmacol Physicians 4:1-6, Sep 1970. 8. Frost JD Jr, DeLucchi MR: J Am Geriatr Soc 27:541-546, Dec 1979. 9. Dement WC et al: Behav Med 5:25-31, Oct 1978. 10. Vogel GW: Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 11. Karacan I, Williams RL, Smith JR: The

sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington, DC, May 3-7, 1971. 12. Pollak CP, McGregor PA, Weitzman ED: The effects of flurazepam on daytine sleep after acute sleep-wake cycle reversal. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, June 30-July 4, 1975. 13. Data on file, Hoffmann-La Roche Inc., Nutley NI

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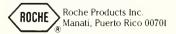
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Precautions: In elderly and debilitated patients, it is recommended that the dosage be limited to 15 mg to reduce risk of oversedation, dizziness, confusion and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in severely depressed patients, or in those with latent depression or suicidal tendencies, or in those with impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, Gl pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins, and alkaline phosphatase; and paradoxical reactions, e.g., excitement, stimulation and hyperactivity.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg recommended initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



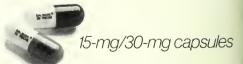
Contemporary Hypnotic Therapy

Dalmane * [flurazepam HCI/Roche] Stands Apart

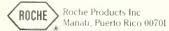
Only one sleep medication objectively fulfills all these important criteria:

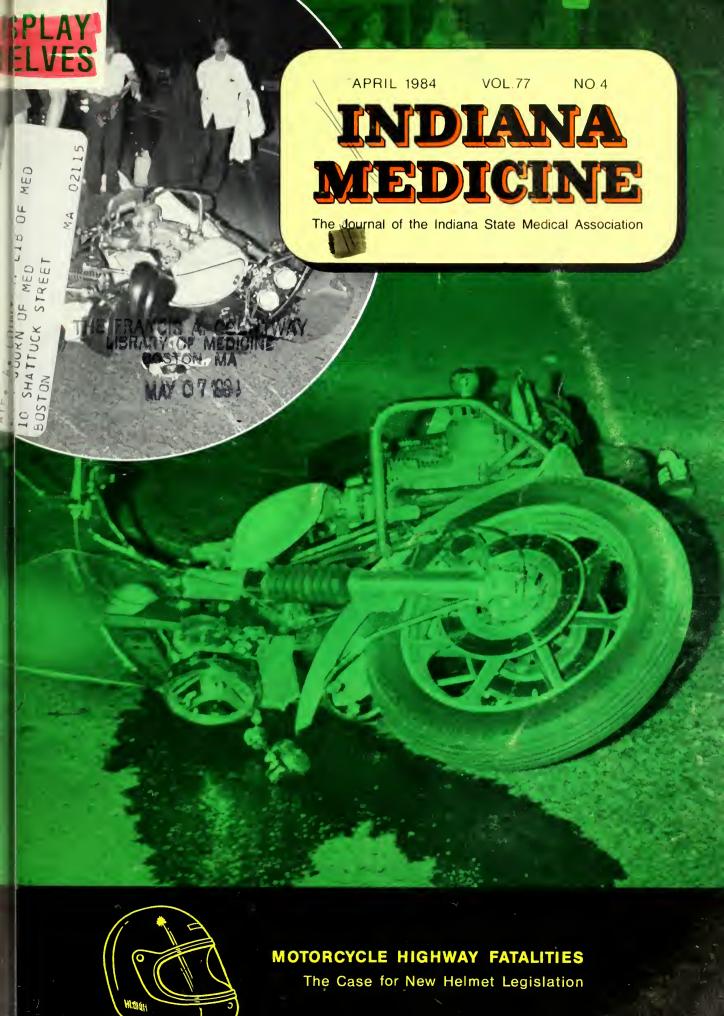


- •More total sleep time on the first 3 nights of therapy.¹
- •More total sleep time on nights 12 to 14 of therapy.¹
- •Continued efficacy for at least 28 nights.
- •Seldom produces morning hangover.3
- Avoids rebound insomnia when therapy is discontinued. 1,4,5









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ABOUT THE COVER

Since repeal of Indiana's mandatory motorcycle helmet law, the use of protective headgear has decreased, resulting in an increase in mortality among motorcyclists. An article dealing with motorcycle helmet usage begins on page 252.—PHOTOS COURTESY OF WAYNE TOWNSHIP FIRE DEPARTMENT, MARION COUNTY

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Three Steps Toward Emergency Medical Protection...

Almost 2,000 people are joining the Medic Alert Foundation every week. Why? Because it provides the best emergency medical identification system available.

Medic Alert, founded in 1956, is a non-profit, charitable and tax-exempt Foundation that claims more than 1.5 million members. Its purpose is to serve people with hidden or special medical problems that cannot be easily seen or recognized.

Allergy to penicillin, diabetes, heart conditions and wearing contact lenses are among the most frequently named of the more than 200 common reasons for membership.

In a renewed effort to communicate with physicians and the public, an Indiana Advisory Committee for Medic Alert has been formed and its primary message is that one of every five individuals—over 40 million Americans—has a special medical condition and is therefore a candidate for Medic Alert membership.

Membership consists of three components:

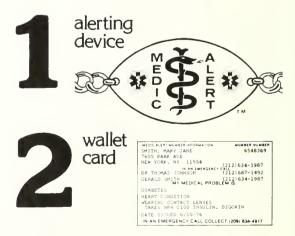
• The emblem, worn as a bracelet or necklace, attracts attention in a medical emergency. On it are engraved the special medical problem or problems of the wearer, the membership number and the telephone number of the Foundation's hotline.

- Medical and emergency personnel can call that number, collect, at any time to receive all the information in a member's emergency record.
- Each member annually receives a wallet card bearing the latest information the member has provided. A member's emergency record, containing personal as well as medical data, can be updated at any time.

A lifetime of protection by Medic Alert is available for a one-time basic membership fee of \$15.

The Indiana State Medical Association endorsed the Medic Alert program in November 1977, thus encouraging physicians to make appropriate patients aware of the program.

The Foundation's address is P.O. Box 1009, Turlock, California 95380.

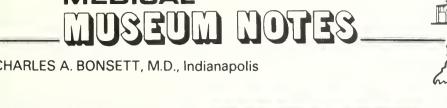


emergency answering service



MEDICAL

CHARLES A. BONSETT, M.D., Indianapolis



■ AME SOMETIMES attaches to the career of a physician, notoricty does so only rarely. Dr. William A. Bowles of Orange County, Indiana, got more than his share of both. Born in Maryland in 1793, he came to Indiana some time after 1820. How and where he obtained his medical education is unknown, but he must have been a most impressive individual.

His contemporaries expressed their feelings about the doctor in these words: "Everybody seemed to admire, almost reverence this remarkable man. . . . He measured in his stocking feet 6 feet, 2 inches in height, and weighed over 200 pounds. . . . He wore a pleasant smile and [had] a marked self confidence. . . . His stock of general information was wonderful. . . . In addition to this [his] voice of superior softness and musical sweetness charmed the listening ear."

"That fellow could talk a man right off his horse."

"His personality, his eccentricity, and his magic power over his fellow man was remarkable. He knew his intellectual powers and used them to mold public opinion. . . . So popular was he as a physician that his name was a household word in southern Indiana."

Dr. Bowles' time and interests were not restricted to the practice of medicine. His most lasting and worthwhile endeavor has always been well known to Indiana physicians. He was the founder of French Lick. He purchased the land in 1838, and plotted the town of French Lick later. It was Bowles who named the three principal mineral springs; Pluto, Persephone, and Bowles. He erected the town's first hotel, and published and edited the town's first newspaper. He also had a thriving whiskey business.

In 1838 he was elected to the Indiana House of Representatives, and was reelected in 1840.

He was also a Baptist minister, but here his business practices conflicted with and took precedence over his theological



Dr. Bowles

considerations. He brought suit against some of the parishioners who were tardy in paying their bills. For this unseeming conduct, charges were brought against the unrelenting Brother Bowles, and he was excommunicated.

With the outbreak of the Mexican War (1845) he raised a company of volunteer infantry (Company "B," Second Regiment), and was elected its captain; and soon thereafter was promoted to colonel of the regiment. He saw action at the Battle of Buena Vista, where, outnumbered three to one, his men, with the aid of an artillery unit, were holding their own quite well, when suddenly Colonel Bowles, for reasons unknown, gave the order to retreat.

The retreat became a rout. Bowles and a few of his men then attached themselves to Colonel Jefferson Davis, who eventually carried the day. Davis was impressed with Bowles' performance, and so was General Zachary Taylor, who arrived on the scene with Bowles when the victory was finally won.

The rout of Bowles' troops was attributed by Davis and Taylor not to the courageous Bowles, but rather to the cowardice of his troops. This view was not shared by the troops, nor by another Hoosier volunteer on the scene, Lew Wallace. When Taylor later ran for President of the United States, he failed to carry Indiana because of the furor raised by Wallace over Taylor's apparent whitewashing role in the Bowles affair.

In 1858 Dr. Bowles brought seven slaves from Mississippi to his hotel, and kept them there in a state of servitude. He was indicted for violating the state's Constitution, and was brought to trial. He carried his case all the way to the Indiana Supreme Court, losing every step of the way.

Dr. Bowles was a staunch Democrat. with Southern sympathies. With the outbreak of the Civil War, he organized a band of Knights of the Golden Circle, and engaged in subversive activities. His boldest plan was to attack and capture the arsenal at Indianapolis, and to free and arm the Confederate prisoners at Camp Morton. The plan never materialized. Government detectives infiltrated his organization and learned of his plans.

Then one night in 1864, while the Knights were holding a secret meeting, a troop of mounted soldiers quietly surrounded Bowles' hotel where the meeting was taking place. Bowles was captured and taken to Indianapolis, charged with treason, and sentenced to death by a military commission. Governor Morton interceded in his behalf, the sentence being commuted by President Lincoln to life imprisonment at the State Prison at Columbus, Ohio. After the War, Bowles was pardoned and sent home.

In 1868 his wife, Eliza, instituted divorce proceedings against him for many acts of misconduct. (Two preceding wives had done the same

Dr. William A. Bowles died in 1873.

WHAT'S HEW?

Terry L. Schmidt, Inc., Health Care Reimbursement Consultants, publisher of Health Care Reimbursement: A Glossary, offer the new book to those who are puzzled by the new words associated with DRG and the old words with a new meaning in DRG. Such terms as DRG tree, Outlier, Partitioning, National DRG Payment, Unbundling, Trimpoint, and Sunlighter, are defined. No one can enjoy DRG without a proper program—this is it.

Colwell Systems, Inc. is offering a free Marketing Information Kit for physicians. It is specifically designed for the doctor in private practice. A six-page portfolio contains four sound and proven steps to help develop an effective program for the practice. In addition, there are forms in the kit to help each doctor survey the practice, evaluate the results of the survey and then suggest possible programs to follow. Samples of office policy brochures with copy suggestions and patient education materials are included.

Cornmed has a totally implantable vascular access device named Mediport^{1M}. It provides continuous or intermittent out-patient delivery of fluids and medications. It is easy to suture into place and, once implanted, it is convenient to use, eliminates exit site care and minimizes catheter care. Special needles permit puncture of the overlying skin, puncture of the silicone rubber diaphragm, and delivery of fluid which passes through a catheter which has previously been installed in a vein or, in the case of regional treatment, an artery.

Hewlett-Packard announces a new 54-page book which presents an easy-to-understand, well-organized approach to preparing effective business graphics. Posters, charts, special effects for overheads, 35mm slides and the use of color are all explained and well illustrated. The book is a work of art—good paper, splendid graphs and follows all its own rules in its teaching illustrations. Orders will be taken by the local Hewlett-Packard sales office.

Alspa Computer has introduced a unique medical office management program designed for the Alspa-Net Local Area Network. The software is designed to manage the medical record and accounting needs of private practitioners and group practices.

The "Needle Destroyer," made by National Instrument Company, disintegrates the needle, removes and deposits the hub into a receptacle. The technician inserts the needle into the "Destroyer" and moves the syringe to the right in a slotted guide. When inserted, the needle completes a low voltage, high amperage circuit, producing an arc which melts the needle and allows the hub to fall into a receptacle.

Avtrex International, a drug distributor, has announced FDA approval to market an Australian developed blood test for herpes. "Simplex-2" is a blood test specific for Herpes Simplex Type 2 (HSV-2), the strain most commonly associated with genital herpes. Simplex-2 can effectively detect HSV-2 infection when symptoms are absent and is valuable in prenatal screening of pregnant women.

The Du Pont Company has developed two medical assay kits which aid in treatment of breast cancer. Used in tandem, one to detect progestin receptors and the other to detect estrogen receptors, they indicate whether the tumor's growth has been influenced by normal female hormones. For hormonally responsive tumors the best treatment is to remove surgically the source of the hormones or to block hormone action by drug intervention.

News of what is new in the medical supply industry is composed of abstracts from news releases by book publishers and manufacturers of pharmaceuticals, clinical laboratory supplies, instruments and surgical appliances. Each item is published as news and does not necessarily constitute an endorsement of a product or recommendation for its use by INDIANA MEDICINE or by the Indiana State Medical Association.

International Business Machines has released for sale Dr. G^{IM}, the first of a family of software products for the IBM PC and XT. Dr. G is a grouper which is an efficient and cost effective management tool for DRG assignments. It will provide a Medical Records Department with instantaneous assignment of DRG and MDC; interactive editing; highlighting of diagnosis and procedure codes required for billing by DRG; flexibility to insure reimbursement maximization; and ready-to-use user-friendly directions.

Abbott Laboratories announces the introduction in the United States of urokinase for catheter clearance, a product that acts to dissolve fibrin blood clots that obstruct indwelling catheters. "Abbokinase Open-Cath" received approval by the FDA recently and is marketed in convenient 1 ml *Univial* containing 5,000 I.U. of urokinase per vial. It achieved a success rate of 98.6% in clinical trials.

Digital Equipment Corporation has a free handbook which covers everything you need to know about how to use a personal computer in your business and how to make an educated purchase. "Look Over The RainbowTM Handbook" contains 275 pages and is valuable no matter what type of business it is applied to.

Beckman Instruments introduces the ParagonTM Acid Hb Electrophoresis reagent kit for use in differentiating between common hemoglobin variants that show similar migrations on alkaline electrophoresis. It is said to eliminate variability of results which occur with other methods of electrophoresis.

Norwich Eaton has developed Vivonex® T.E.N. (Total Enteral Nutrition), a single formula designed to meet the specific needs of more patients and to speed recovery in the broadest possible range of patients. Vivonex® T.E.N. is a high nitrogen, elemental diet especially useful in stressed catabolic patients. It is not for parenteral administration.

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Please be assured that we won't introduce new medical management procedures and then bid you a fast farewell. Our method is to diagnose your problems and then offer consultations, prescriptions and continual support to solve them.

DIAGNOSES Unlike typical computer management companies, we never start by presenting a service and trying to shoehorn it into your medical office.

A DR. TAYLOR We start by asking "What do you really need?" Next, together, we'll clarify what you don't need. Only then can an efficient, cost-effective program be chosen for your medical office.

CONSULTATIONS In plain English, not computer or management jargon, we'll explain how to strengthen your financial control. For example, we can help you design better statements, collection notices, and routing slips.

Remember that, while always available, we do not make great demands on your time. The idea is to save your time. Your staff will be free to devote more time to patients and less to paperwork.



prescribe only what you really need. Maybe it's a service bureau relationship to get your bills out. Maybe it's your own

IBM Personal Computer. Maybe it's a sophisticated in-office system. Maybe it's an instant hook up with computers at Wausau that lets you launch a billing cycle without addressing an envelope or licking a stamp.

PROGNOSES Your prognosis should be excellent. We serve more than 400 medical offices in 30 states, and they are reporting results such as: "Swifter cash flow." "Stronger financial control." "No month's end billing rush." "Improved collection rate." "Reduced number of lost charges." "Better use of staff."

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Why not give your practice the attention it deserves? Mail the

coupon or phone today for more details. Yes, please send me your easy-to-use Medical Office Management Guide absolutely free. I understand there's no obligation. (please print) MEDICAL OFFICE_ ADDRESS____ _STATE__ NO. OF PHYSICIANS SPECIALTY Management Systems of Wausau MANAGEMENT P.O. Box 1000 YSTEMS Wausau, WI 54401 • 1 800 826-0028 In Wisconsin: 1800 472-0023 We work hard to support you.

FUTURE FILE

Neurotrauma

Bethesda Hospital, Cincinnati, will sponsor a "Neurotrauma Conference" at Kings Island Inn in Cincinnati on July 7 and 8. It is planned particularly for emergency physicians and primary care physicians. The registration fee is \$195.

Contact Thomas J. O'Conner, Bethesda Hospitals, Cincinnati 45206—(513) 569-6339.

Medical Hypnosis

Medical Hypnosis will be the subject of the Sixth Annual Institute to be held June 8 to 10 at the George Washington University School of Medicine in Washington, D.C. It is accredited for 20 hours of Category 1 AMA credit.

Write or phone George Washington University Medical Center, 2300 K Street, N.W., Washington, D.C. 20037—(202) 676-4285.

Back Problems

"Assessment of the Back, Chronic Pain, Surgical Management and Nonsurgical Management of Back Problems" will be the subjects of a CME program at the Red Carpet Hotel, 4747 S. Howell Ave., Milwaukee, Wisconsin on Saturday, June 2. The fee is \$95, which includes course materials, luncheon and refreshments. Dr. Hamilton Hall of the Toronto General Hospital will be the principal discussant.

The contact is Registrar, P.O. Box 133, Franksville, Wisc. 53126—(414) 886-0116.

Internal Medicine Review

An intensive review of internal medicine for physicians planning to write the American Board of Internal Medicine Certifying Examination and for practicing internists who desire a contemporary review will be on July 22-28 at the University of Delaware. Housing is available immediately adjacent to the conference facility of the Newark Campus of the University of Delaware. The course carries 45 hours of Category I AMA credit.

For details call or write Sylvia Brocka, 2800 Pennsylvania Ave., Wilmington, Del. 19806—(302) 451-8151.

Indiana University CME

For the Primary Care Physician

April 19—Infectious Diseases: Update on Therapy—Reid Memorial Hospital, Richmond.

April 25—7th annual Arthur B. Richter Conference in Child Psychiatry Treatment—Adam's Mark Hotel, Indianapolis.

May 2—Genetics for the Medical Practitioner and Nurses—Indiana State Board of Health, Indianapolis.

May 8-10—Family Practice Review, Part I—Sheraton Meridian, Indianapolis.

June 19-21—Family Practice Review, Part 11—Sheraton Meridian, Indianapolis.

For the Specialist

April 13-14—Vitrectomy for Anterior Segment Surgeon—Community Hospital and/or Midway Motor Lodge, Indianapolis.

April 28—Consultations in Gastroenterology: Issues and Answers—Sheraton Meridian, Indianapolis.

May 15-17—Abdominal Imaging and the Gastrointestinal Tract—Holiday Inn North, Indianapolis.

For additional information, contact Indiana University School of Medicine, CME Division, 1120 South Drive, Indianapolis 46223—(317) 264-8353.

Health Care Costs

"Restraining Health Care Costs: Responsibility-Strategies-Solutions" will be presented by Northern Kentucky University Business Industry and Labor Institute and Northern Kentucky Area Development District with a faculty of experts, including Dr. Ronald Blankenbaker, Indiana health commissioner, in Cincinnati May 17.

For full information call Phyllis J. Jonas, (606) 572-5602.

The Journal of the American Medical Association publishes a list of CME courses for the United States twice yearly. The January fisting features courses offered from March through August; the July listing features courses offered from September through February.

Microsurgery

"Microsurgery Training Workshops" are conducted by The Microsurgery Education and Research Foundation in co-sponsorship with The Surgical Education and Research Foundation, directed by Dr. Marshall J. Orloff, Professor of Surgery, U.C. San Diego School of Medicine. The fee is \$1,300. CME credit hours in Category 1 are 35. The courses have been conducted many times in 1983 and in early 1984. Dates open are May 14-18 and June 4-8.

Write or phone Hazel Sayers, P.O. Box 22514, San Diego, Calif. 92122—(619) 294-6100.

Asthma and Allergies

"Asthma and Allergies" will be the subject of a live, four-hour cable television program May 7. It is directed to the public and will announce a toll-free telephone number through which viewers may ask questions which are then answered on the air. The number is 1-800-828-1.1FE. Past informathons have received over 100,000 calls.

The program is produced in cooperation with the Asthma & Allergy Foundation of America, the American Academy of Allergy and Immunology, the American College of Allergists and the National Institute of Allergy and Infectious Diseases. It is sponsored by Searle Laboratories.

Indianapolis CME Meetings

CME courses announced by the Methodist Hospital in Indianapolis are as follows:

April 25—"Practical Child Neurology for the Practitioner: Two Problems" at Adam's Mark Hotel.

May I & 2—10th annual William Niles Wishard, Jr. Memorial Lecture. Indiana University School of Medicine is a co-sponsor.

May 10 & 11—19th annual Gordon W. and Mae Batman Lecture at Methodist Hospital.

Further information is available from Dixie E. Mattingly, 1604 N. Capitol Ave., Indianapolis 46202—(317) 929-8881.

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WILLIAM M. DUGAN, JR., M.D.

Clinical Oncology Center Methodist Hospital of Indiana, Inc. New information from Indiana Division American Cancer Society, Inc. 4755 Kingsway Dr., Suite 100 Indianapolis 46205

EVERY PHYSICIAN'S OFFICE— A CANCER DETECTION CENTER

CANCER CORNER

Survival Rates Up

Newly updated statistics on the survival experience of cancer patients diagnosed with cancer between 1973 and 1980 show continued improvement, with 48% of all patients now curable. For a number of major types of cancer, more than two-thirds of all patients are curable.

Last year, the reported five-year relative survival rate was 46% for all cancer patients, blacks and whites combined, diagnosed with cancer between 1973 and 1979.

Some of the cancers with the most encouraging five-year relative survival rates, all races combined, are: thyroid, 92%; endometrium, 87%; testis, 82%; melanoma, 79%; bladder, 72%; prostate, 67%; uterine cervix, 67%; female breast, 73%; Hodgkin's disease, 70%; and larynx, 66%. Survival continues to be poor for some cancers, such as lung, pancreas, stomach, and esophagus.

For whites, the five-year relative survival rate is 49% for patients diagnosed with cancer between 1973 and 1980. This is better than the 47% reported last year. Black patients diagnosed with cancer between 1973 and 1980 have a five-year relative survival rate of 37%, up from last year's 35%.

Oncology Nursing Society

The Oncology Nursing Society will host their annual meeting May 2-5 in the Sheraton Centre, Toronto, Canada. For registration information contact Nancy Berkorvity, ONS, 3111 Banksville Road, Suite 200, Pittsburgh, Pa. 15216—(412) 344-3899.

Resource Kit on Unproven Methods

An Unproven Methods of Cancer Management-Resource Kit is currently available and located in the Division Office Medical Affairs Department. This

resource kit contains five slide sets with folders, literature and visuals on the following: Gerson Method, O. Carl Simonton, M.D., Laetrile, Hariton Alivizatos, M.D., Dimethyl Sulfoxide (DMSO).

The booklet "Unproven Methods of Cancer Management" (3014-PE) is still available through the Distribution Department.

NCI Cancer Information Service Has New Telephone Number

The National Cancer Institute's tollfree Cancer Information Service now has one nationwide telephone number-1-800-4-CANCER. You will automatically be connected with your state or regional office when you call. The hours are Monday through Friday from 9 to 5. The Cancer Information Service is an excellent resource for guestions about cancer risks and prevention. methods of detecting and diagnosing cancer, ways of treating cancer, rehabilitation assistance, community resources and support groups, and counseling services for cancer patients and families. The call is free and confidential. NCI has many useful booklets on treatment methods and specific types of cancer and will send these booklets free of charge.

Free Materials

- Eating Hints—Recipes and Tips for Better Nutrition During Cancer Treatment; 86 pg. booklet containing tips for coping with treatment-related problems associated with eating: nausea and vomiting, loss of appetite, mouth sores, dry mouth, intestinal distress and fatigue. Includes many simple recipes for nutritious and palatable foods for the patient undergoing treatment.
- Chemotherapy and You—A Guide to Self-Help During Treatment; 31 pg.

booklet explaining chemotherapy, possible side effects and what to do about them. Emphasis is on simple and complete explanation and it includes a chart of anti-cancer drugs and side effects.

- Radiation Therapy and You—A Guide to Self-Help During Treatment; 24 pg. booklet explaining both external and internal radiation therapy, possible side effects and what to do about them.
- Taking Time—Support for People and the People Who Care about Them; 64 pg. booklet that is excellent for cancer patients and their family members. It addresses their feelings and emotional problems and gives suggestions on how to cope with them. Topics covered include sharing feelings, dealing with friends, going back to work, and solving problems within the family.
- Medicine for the Layman—Cancer Treatment; 32 pg. booklet that provides a short history of progress in the treatment of cancer. Topics include cell growth in normal tissues v. cancerous tissues, how cancer is treated, and the testing and use of drugs in cancer treatment. It is written in terms that the patient and family members can understand

The above materials are available free of charge to cancer patients and their family members and the professionals who work with them. MTC Chapter leaders may order in bulk by stating how many they wish to receive and what the materials will be used for.

To order materials from the National Cancer Institute write:

National Cancer Institute
Office of Cancer Communications
Building 31, Room 10A18
Bethesda, Md. 20205

Be sure to enclose your name and address in a clear and legible form and state how many of each item you want.

prescribing, see complete prescribing information in 30. literature or PDR. The following is a brief summary.

drug is not indicated for initial therapy of edema or rtension. Edema or hypertension requires therapy d to the individual if this combination represents the ge so determined, its use may be more convenient in it management. Treatment of hypertension and edema static, but must be reevaluated as conditions in each

Indications: Concomitant use with other potassium-agents such as spironolactone or amiloride. Further use a, progressive renal or hepatic dysfunction, hyperkalemia. sting elevated serum potassium Hypersensitivity to either nent or other sulfonamide-derived drugs.

ps: Do not use potassium supplements, dietary or othernless hypokalemia develops or dietary intake of potassium supplements, dietary or othernless hypokalemia develops or dietary intake of potassium is potassium tablets should not be used. Hyperkalemia use and has been associated with cardiac irregularities. It likely in the severely ill, with urine volume less than one is, the elderly and diabetics with suspected or confirmed sufficiency Periodically, serum K* levels should be deterned to the properties of the

s has been reported with thiazide diuretics.

tions: Do penodic serum electrolyte determinations (parlimportant in patients vomiting excessively or receiving rail fluids, and during concurrent use with amphotericin B costeroids or corticotropin [ACTH]). Periodic BUN and creatinine determinations should be made, especially in rily, diabetics or those with suspected or confirmed renal ency Cumulative effects of the drug may develop in with impaired renal function. Thiazides should be used ution in patients with impaired hepatic function. They can ate coma in patients with severe liver disease. Observe ly for possible blood dyscrasias, liver damage, other idicinc reactions. Blood dyscrasias have been reported in receiving trainativerene, and leukopenia, thrombocyto-igranulocytosis, and aplastic and hemolytic anemia have ly for possible blood dyscrasias, liver damage, other idoc reactions. Blood dyscrasias have been reported in receiving triamterene, and leukopenia, thrombocytogranulocytosis, and aplastic and hemolytic anemia have iported with thiazides. Thiazides may cause manifestation tidiabetes mellitus. The effects of oral anticoagulants may eased when used concurrently with hydrochlorothiazide, adjustments may be necessary. Clinically insignificant ons in arterial responsiveness to norepinephrine have ported. Thiazides have also been shown to increase the ing effect of nondepolarizing muscle relaxants such as raine. Friamterene is a weak folic acid antagonist. Do 2 blood studies in cirrhotics with splenomegaly. Anti-nsive effects may be enhanced in post-sympathectomy. Use cautiously in surgical patients. Triamterene has aund in renal stones in association with the other usual s components. Therefore, "Dyazide' should be used with in patients with histories of stone formation. A few occur-of acute renal failure have been reported in patients on e when treated with indomethacin. Therefore, caution is Lin administering nonsteroidal anti-inflammatory agents vazide. The following may occur transient elevated BUN titinne or both, hyperglycemia and glycosuria (diabetic requirements may be altered), hyperuricemia and gout. Intoxication (in hypokalemia), decreasing alkali reserve sible metabolic acidosis. "Dyazide' interferes with fluores-assurement of quindine Hypokalemia is uncommon withe," but should it develop, corrective measures should be such as potassium supplementation or increased dietary of potassium-rich foods. Corrective rheasures should be used reported interferes with fluores-assurement of guindine Hypokalemia. Concurrent use inforpropamide may increase the risk of severe hypotaes revenue potassium levels determined tinue corrective measures and "Dyazide' should laborations or concurrent use inforpropamide may increase the risk of severe hypotaes eshould be withdrawn before conducting tests for parafunction.

es may add to or potentiate the action of other antihyper-drugs.

s reduce renal clearance of lithium and increase the risk mitoxicity.

m toxicity.

• Reactions: Muscle cramps, weakness, dizziness, headdry mouth, anaphylaxis, rash, urticaria, photosensitivity,
a other dermatological conditions; nausea and vomiting,
a, constipation, other gastrointestinal disturbances; pospotension (may be aggravated by alcohol, barbiturates,
cotics). Necrotizing vasculitis, paresthesias, icterus,
atilis, xanthopsia and respiratory distress including pneuand pulmonary edema, transient blurred vision, sialadedo vertigo have occurred with thiazides alone. Triamterene
en found in renal stones in association with other usual
is components. Rare incidents of acute interstitial nephritis
been reported. Impotence has been reported in a few
s on "Dyazide", although a causal relationship has not
stablished

ed: 'Dyazide' is supplied in bottles of 1000 capsules; Unit Packages (unit-dose) of 100 (intended tor Institu-use only); in Patient-Pak™ unit-of-use bottles of 100.

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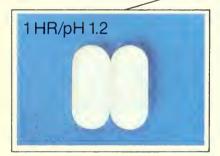


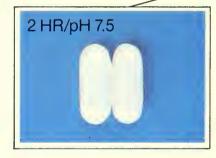
ZORprin® (aspirin) is released in the alkaline environment of the small intestine.

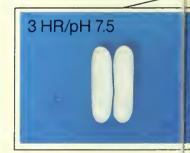


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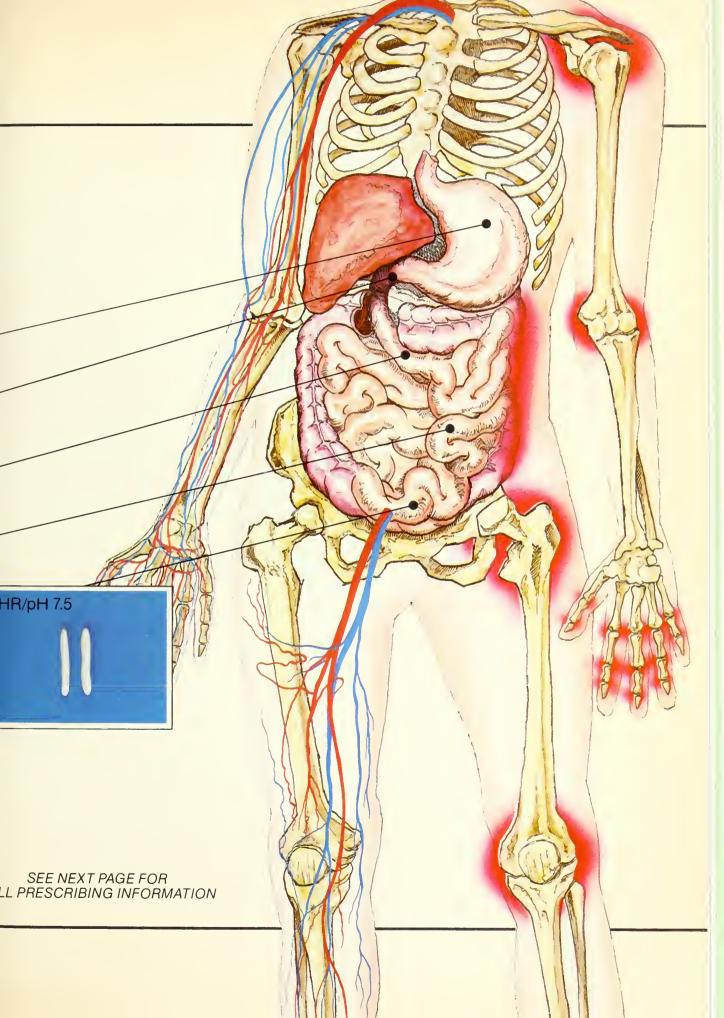


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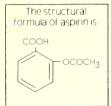
Your first step in arthritis therapy... **ZORPIN** (ASPIRIN) Zero-Order Release.





ZORprin (ASPIRIN) Zero-Order Release

DESCRIPTION: Each capsule-shaped tablet of Zorprin contains 800 mg of aspirin, formulated in a special matrix to control the release of aspirin after ingestion. The controlled availability of aspirin provided by Zorprin approximates zero-order release, the *in vitro* release of aspirin from the tablet matrix is linear and independent of the concentration of the drug. CLINICAL PHARMACOLOGY: Aspirin, as contained in Zorprin, is a salicylate that had demonstrated anti-inflammatory and analgesic activity. Its mode of action as an anti-inflammatory and analgesic agent may be due to the inhibition of synthesis of prostaglandins, although its exact mode of action is not known. In Zorprin dissolution is pH-dependent. In vitro studies have shown very little



aspirint to be released in acidic solutions, whereas, Zorprin releases the majority of its aspirin (90%) in a zero-order mode at a neutral to alkaline pH. It is this pH dependence of Zorprin that reduces direct contact between aspirin and the gastric mucosa, resulting in a reduction of its gastrointestinal side-effect potential. Bloavailability data for Zorprin have confirmed that plasma levels of salicylic acid and acetylsalicylic acid can be measured 24 hours after a single oral dose. This substantiates a twice daily dose regimen. Multiple dose bioavailability studies showed similar steady-state salicylate levels for Zorprin as for conventional release aspirin using the same total daily dose. Long-term monitoring of salicylate levels showed no signs of accumulation once steady-state levels were reached (4-6 days). □ Studies of *in vivo* prostaglandin levels (PGE2) have shown Zorprin plasma levels of salicylic acid and acetylsalicylic acid to reduce PGE2 levels 14 hours after a single oral 800 mg dose while an equivalent dose of aspirin produced a reduction of PGE2 levels only through six hours. Zorprin's effect on prostaglandins other than PGE2 has not been determined. □ Salicylates are excreted mainly by the kidney, and from studies in humans it appears that salicylate is excreted in the urine as free salicylic acid (10%), salicylure acid (75%) salicylic phenolic (10%), acyl glucuronides (5%) and gentisic acid (<7%). □ INDICATIONS & USAGE:

the kidney, and from studies in humans it appears that salicylate is excreted in the urine as free salicylic acid (10%), salicyluric acid (75%) salicyluric properties (10%), and gentisic acid (<1%). INDICATIONS & USAGE:

Zorprin is indicated for the treatment of rheumatoid arthritis and osteoarthritis. The safety and efficacy of Zorprin have not been established in those rheumatoid arthritic patients who are designated by the American Rheumatism Association as Functional Class IV (incapacitated, largely or wholly bedridden, or confined to wheelchair, little or no self-care). In patients treated with Zorprin for rheumatoid arthritis and osteoarthritis, the anti-inflammatory action of Zorprin has been shown by reduction in pain, morning stiffness and disease activity as assessed by both osteoartinitis, the artificial initiation action of 20prilin has been shown by reduction in pain, morning stitlness and offease activity as assessed by both the investigators and patients. In clinical studies in patients with rheumation arthritis and osteoarthritis. Zorprin has been shown to be comparable to conventional release aspirin in controlling the aforementioned signs and symptoms of disease activity and to be associated with a statistically significant reduction in the milder gastrointestinal side effects (see ADVERSE REACTIONS). Zorprin may be well tolerated in some patients who have had gastrointestinal side effects with conventional release aspirin, but these patients when treated with Zorprin should be carefully followed for signs and symptoms of gastrointestinal bleeding and ulceration. I Since there have been no controlled trials to demonstrate whether or not there is any beneficial symptoms of gastrointestinal bleeding and ulceration \square Since there have been no controlled trials to demonstrate whether or not there is any beneficial effect or harmful interaction with the use of Zorprin in conjunction with other nonsteroidal anti-inflammatory agents (NSAI), the combination cannot be recommended (see **Drug Interactions**) \square **Because of its relatively long onset of action, Zorprin is not recommended for antipyresis or for short-term analgesia.** \square **CONTRAINDICATIONS**: Zorprin should not be used in patients known to be hypersensitive to salicylates or in individuals with the syndrome of nasal polyps, angioedema, bronchospastic reactivity to aspirin, renal or hepatic insufficiency, hypoprothrombinemia or other bleeding disorders. Zorprin is not recommended for children under 12 years of age; it is contraindicated in all children with fever accompanied by dehydration. \square **WARNINGS**: Zorprin should be used with caution when anticoagulants are prescribed concurrently, since aspirin may depress platelet aggregation and increase bleeding time. Large doses of salicylates may have hypoglycemic action and enhance the effect of the oral hypoglycemics, concomitant use therefore is not recommended. However, if such use is necessary, dosage of the hypoglycemic agent must be reduced. The hypoglycemic action of the salicylates may also necessitate adjustment of the insulin requirements of diabetics. \square While salicylates in large doses have a unicosuric effect, smaller amounts may reduce water excretion and increase serum unic acid. \square USE IN PREGNANCY. Aspirin can harm the fetus when administered to pregnant women. Aspirin interferes with maternal and infant hemostasis and may lengthen the duration of pregnancy and parturition. Aspirin has produced teratogenic effects and increases the incidence of stillbirths and neonatal deaths in animals. \square If this drug is used during pregnancy, or if the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to the becomes pregnant while taking this drug, the patient should be apprised of the potential nazard to the letus. It Aspirin should not be taken during the last 3 months of pregnancy | PRECAUTIONS: Appropriate precautions should be taken in prescribing 2 orprin for patients who are known to be sensitive to aspirin or salicylates. Particular care should be used when prescribing this medication for patients with erosive gastritis, peptic ulcer, mild diabetes or gout. As with all salicylate drugs, caution should be exercised in prescribing Zorprin for those patients with bleeding tendencies or those or anticoagulants | In order to avoid exacerbation of disease or adrenal insufficiency, patients who have been on prolonged controsteroid therapy should have their therapy tapered slowly rather than discontinued abruptly when Zorprin is made a part of the treatment program | Patients receiving large doses of aspirin and/or prolonged therapy may develop mild salicylate intoxication (salicylism) that may be reversed by dosage reduction.

Salicylates should be used with caution in patients with severe hepatic damage, preexisting can produce changes in thyroid function tests. □ Salicylates should be used with caution in patients with severe hepatic damage, preexisting hypoprothrombinemia. Vitamin K deficiency and in those undergoing surgery □ Since aspirin release from Zorprin is pH dependent, it may change in those conditions where the gastric pH has been increased as a result of antacids, gastric secretion inhibitors or surgical procedures. □ Drug Interactions: (See WARNINGS) Aspirin may interfere with some anticoagulant and antidiabetic drugs □rugs which lower serum unclacid by increasing uric acid excretion (uricosurics) may be antiagonized by the concomitant use of aspirin, particularly in doses less than 2.0 grams/day Nonsteroidal anti-inflammatory drugs may be competitively displaced from their albumin binding sites by aspirin This effect may negate the clinical efficacy of both drugs. Also, the gastriontestinal inflammatory potential of nonsteroidal anti-inflammatory drugs may be potentiated by aspirin. The combination of alcohol and aspirin may increase the risk of gastriontestinal bleeding □ Aspirin may enhance the activity of methotrexate and increase its toxicity. □ Sodium excretion produced by spironolactone may be decreased in the presence of salicylates. Concomitant administration of other anti-inflammatory drugs may increase the risk of gastrointestinal ulceration. Urinary alkalinizers decrease aspirin's effectiveness by increasing the rate of salicylate renal excretion Phenobarbital decreases aspirin's effectiveness by enzyme induction Deregnancy Category D. See WARNINGS Section. Nursing Mothers: Salicylates have been detected in the breast milk of nursing mothers. Because of the potential for serious adverse reactions from aspirin in nursing infants, a decision should be made whether to discontinue nursing or discontinue the drug, taking into account the benefit of the drug to the mother appears of a ADVERSE REACTIONS: Hematologic: Aspirin interferes with hemostasis. Patients with a history of blood coagulation defects or receiving anti-coagulant drugs or with severe anemia should avoid Zorprin. Aspirin used chronically may cause a persistent iron deficiency anemia.

Gastrointestial: Aspirin may potentiate peptic ulcer, and cause stomach distress or heartburn. Aspirin can cause a peristient flori deticiency ariental. Death office and a spirin may potentiate peptic ulcer, and cause stomach distress or heartburn. Aspirin can cause an increase in occult bleeding and in some patients massive gastrointestinal bleeding. However, the greatest release of active drug from Zorprin is designed to occur in the small intestine over a period of time. This has resulted in fewer symptomatic gastrointestinal side effects.

Allergic: Allergic and anaphylactic reactions have been noted when hypersensitive individuals have taken aspirin. Fatal anaphylactic shock, while not common, has been reported.

Respiratory: Aspirin intolerance, manifested by exacerbations of bronchospasm and rhinitis, may occur in patients with a history of nasal polyps, asthma, or rhinitis. The mechanism of this intolerance is unknown but may be the result of aspirin-induced shunting of prostaglandin synthesis to the lipoxygenase pathway and the liberation. of leukotrienes, e.g. slow-reacting substance of anaphylaxis. Dermatologic: Hives, rashes, and angioedema may occur, especially in patients suffering from chronic urticaria Dentral Nervous System: Taken in overdoses, aspirin provides stimulation which may be manifested by tinnitus. Following initial from chronic urticaria

Central Nervous System: Taken in overdoses, aspirin provides stimulation which may be manifested by tinnitus. Following initial stimulation, depression of the central nervous system may be noted
Renal: Aspirin rarely may aggravate chronic kidney disease.
Hepatic: High doses of aspirin have been reported to produce reversible hepatic dysfunction.
OVERDOSAGE: Overdosage, if it occurs, would produce the usual symptoms of salicylism tinnitus, vertigo, headache, confusion, drowsines, sweating, hyperventilation, vomiting or diarrhea. Plasma salicylate levels in adults may range from 50 to 80 mg/dl in the mildly intoxicated patient to 110 to 160° mg/dl in the severely intoxicated patient. An arterial blood pH of 7.1 may indicate serious poisoning. The clearance of salicylates in children is much slower than adults and should receive due consideration when aspirin overdosages occur in infants, salicylate half-lives of 30 hours have been reported in infants 4-8 months old. Treatment for mild intoxication should include emptying the stomach with an emitic, or gastric lavage with 5% sodium bicarbonate. Individuals suffering from severe intoxication should, in addition, have forced divisors by intravence in the properties of sodium bicarbonate and divisors are seen to programme ages. the stomach with an émitic, or gastric lavage with 5% sodium bicarbonate. Individuals suffering from severe intoxication should, in addition, have forced diuresis by intravenous infusions of sodium bicarbonate and dextrose or sodium lactate. In extreme cases, hemodialysis or peritoneal dialysis may be required. ("A plasma salicylate level of 160 mg/dl in an adult is usually considered lethal.) | DOSAGE & ADMINISTRATION: In order to achieve a zero-order release, the tablets of Zorprin should be swallowed intact. | Breaking the tablets or disrupting the structure will alter the release profile of the drug. | It is recommended that Zorprin be taken with sufficient quantities of lluids (8 oz. or more.) | Adult Dosage. For mild to moderate pain associated with rheumatoid arthritis and osteoarthritis, the recommended initial dose of Zorprin is 1600 mg (2-800 mg tablets) twice a day. Because of Zorprin's prolonged release of aspirin into the bloodstream, Zorprin tablets may be taken as a bid dose. Further adjustment of the dosage should be determined by the physician, based upon the patient's response and needs. Since it will take 4-6 days to reach steady-state levels of salicylic acid with Zorprin, it is recommended dosages be given for at least one week before further adjustment. In general, patients with rheumatoid arthritis seem to require higher doses of Zorprin than do patients with osteoarthritis. | Zorprin is not recommended for children below the age of 12. | HOW SUPPLIED: Zorprin Tablets 800 mg; plain, white capsule-shaped tablets. | Bottles of 100 Tablets - NDC 0524-0057-01 | Caution: Federal law prohibits dispensing without prescription. | U.S. Patent No. 4,308,251 | Manufactured and Distributed by: BOOTS PHARMACEUTICALS, INC., Shreveport, Louisiana 71106 U.S.A.

RONALD G. BLANKENBAKER, M.D. State Health Commissioner

New information from Office of the Commissioner Indiana State Board of Health 1330 W. Michigan St. Indianapolis, Ind. 46206 317-633-8400

PUBLIC HEALTH NOTES

Our Aging Population

Citizens 65 years of age and older comprise approximately 1I percent of the U.S. population today. It is predicted that by the year 2000 the elderly will represent 17 to 20 percent of our population.

Although a large portion of the elderly are independent and self-sustaining, this group consumes a major portion of the health care services in this country today. This expense is rising so rapidly that it is anticipated the Medicare program will be bankrupt within the next several years and will have a \$300 billion deficit by 1995 unless some drastic changes are made soon. (For further details of this dilemma, see the report of the Department of Health and Human Services' Advisory Council on Social Security, chaired by former Indiana Governor Otis R. Bowen, M.D.)

Stresses to Health Care Delivery

The increased number of elderly patients with their special requirements due to chronic disease and disability and resultant enormous costs has created many stresses and a panic of sorts in Indiana which has resulted in the push for "quick fix" solutions. This is most alarming in light of the fact that this situation is quite complex and frequently poorly understood, especially by the public. Furthermore, this is not something which suddenly "crept up on us," but rather reflects a long-standing reluctance to deal with the basic problem—aging.

The medical profession should be very concerned about these happenings and should take a much greater role in the proposed resolutions since they will have a direct effect on the practice of medicine and, more importantly, because of the profession's responsibility to see that the elderly receive appropriate care.

We should discuss here some of the conflicts of attitude which make it extremely difficult to develop successful solutions.

Caring for the Incurable

To those of us who have had con-

siderable experience caring for the elderly it is obvious that many of the symptoms of the aging process are incurable. Most practicing physicians have felt the frustration of having to say: "I'm sorry but there is little that I can do about your joint pains, memory loss, or other problems associated with the aging process." After all, physicians were taught to be gratified by curing disease and not from merely modifying or accepting it. Consequently, we are caught up in a severe conflict (the first of three discussed here) that many health professionals elect to deal with only superficially or by refusing to recognize it.

As I recall my own experience with the care of nursing home patients, the most gratifying remembrances are related to those individuals and their families who were able to accept (as I had to) that we were not going to be able to stop or reverse the aging process but would do everything possible to modify or slow down the progressive changes and do so in a compassionate, concerned manner. 1 found that a successful rapport was dependent upon my ability to listen carefully and to provide an objective and caring, but firm, response. Listening to complaints without appearing to be disinterested or in a hurry was generally more successful than any medication in my drug armamentarium. This was an attitude I had to develop and not one that was taught in the educational system.

It should be obvious to all of us that any proposed solution to the health care dilemma of the elderly should include a recognition that the medical education process must be modified to more adequately address the special problems of this population.

Society Has a Responsibility

To further complicate the matter, nursing homes have become, in many situations, a place where society may put its citizens when *it* no longer feels able or comfortable caring for them at home. This creates a second conflict which is the personal responsibility to care for our

elderly versus the inconvenience of doing so in today's environment where sons, daughters, and their spouses are all working outside the home. The resultant social attitude is a feeling of guilt often expressed in the form of anger and hostility toward the system which made this convenient care possible in the first place.

Can this possibly be the reason relatives visit the nursing home infrequently or not at all? Does it also explain the sometimes unreasonable expectations concerning what the system can and should provide? To gain some insight into this social reaction, I highly recommend the reading of: "How My Mother Helped Me Put Her in a Nursing Home," by Bonnie Ghazerbekian in Ms. magazine, March 1979, pages 62-67, and reproduced in Reader's Digest, June 1983, page 133.

We should be very concerned that little is being done today to address the positive and negative interactions between our society and its elderly population. What is even worse is that our society is reluctant to accept any responsibility in this area. Clinical medicine and public health should be working together to create better insight into this problem so future solutions are more likely to succeed.

Containment of Health Care Costs

It is clear tht the expanding health needs of our elderly will continue to increase the health care costs of this country. It does not seem possible in the current atmosphere to expect that the system will increase its services and quality of care to this population while simultaneously containing or decreasing overall costs. Yet that is, in effect, what is being asked. This is the third significant conflict standing in the path of resolving health care problems of the aging.

The medical profession should be especially alarmed at many developments today in the legislative arena which intend to contain costs but may do little

CONTINUED ON PAGE 303



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To obtain Category 1 credit for this month's article, complete the quiz on page 265.



Anorexia Nervosa and Bulimia

RICHARD N. FRENCH JR., M.D.¹ ELGAN L. BAKER, Ph.D.² Indianapolis

NORENIA NERVOSA has been a human affliction for centuries, but was first clearly described by Lesegue and Gull in the 19th century. In 1914 Simmond described "pituitary cachexia," but in most patients suffering from severe emaciation the role of the pituitary is unclear. In the 1950s anyone who had a 25% weight loss due to psychological causes was considered to have this disorder. In 1961 Bruch noted that these patients had severely

distorted perceptions concerning their bodies, had lost the ability to perceive hunger and had become very ineffective in their ability to think and work.³⁻⁵

The current diagnostic criteria for anorexia nervosa include: (1) the intense fear of becoming obese; (2) disturbed perception of the actual body image; (3) loss of at least 25% of the body weight below that expected for age and height on a growth chart; (4) refusal to maintain or regain body weight; and (5) no known physical illness that would account for the weight loss.

Bulimia (lit. "ox-hunger") is an interesting and disturbing related eating disorder that has become apparent in recent years. It is characterized by compulsive binge eating and purging. The patient (usually female) will typically stuff herself with perhaps 2,000-3,000 calories, then eliminate it by vomiting or by intermittent laxative abuse and diuretics. Some patients with bulimia may have initially had symptoms of

anorexia and often still have an obsessive desire to lose weight. However, there are many individuals with bulimia, perhaps initially over-weight, who suffer from the disorder but retain normal weight. 5-10

The current diagnostic criteria for bulimia include: (1) recurrent episodes of binge eating; (2) awareness that the eating pattern is abnormal, but inability to stop eating voluntarily; (3) depressed mood and self-deprecating thoughts following binges; (4) the bulimic episodes are not due to anorexia nervosa or any known physical disorder; and (5) at least three of the following: (a) consumption of high calorie easily ingested food; (b) inconspicuous eating during a binge; (c) termination of the eating episode by abdominal pain, sleep, social interruption, or self-induced vomiting; (d) repeated attempts to lose weight by dieting, vomiting, use of cathartics or diuretics; (e) frequent weight fluctuations greater than 10 lbs. due to alternating binges and fasts.6

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Anorexia Nervosa: Incidence and Course of Illness

Females afflicted with anorexia nervosa outnumber males nine to one. The condition is often seen in affluent societies, in upper and middle class families and among whites. Prevalence appears to be from 1 in 250 to 1 in 100 white females. It is more commonly a disorder of teenagers, but has been identified as a longstanding illness in some women in their fifties.

The afflicted individual's life is totally involved in her disorder. She avoids weight gain, fears fat and fears personal incompetence in work or in relationships. She is often depressed, obsessional and compulsive. She may be histrionic and phobic. Amenorrhea or menstrual difficulties are common. Family and close friends are enmeshed (i.e., psychologically over-involved) and overprotective of the patient and her symptoms, but the family eventually becomes defensive, frightened and exasperated by the disorder. The patient becomes irritable, indecisive and helpless, appears unusually passive or compliant but later can be perceived as obstinate and unreasoning when approached about her weight.

Most of these individuals are excessively orderly and clean. They may over exercise or be quite hyperactive. They appear to be psychosexually immature, but the disturbances in interpersonal relationships are far more global with problems in areas of identification, control, sharing, etc. [22-16]

Most of the physical findings are those seen with any form of severe malnutrition or chronic starvation. These include amenorrhea, significant loss of body fat, dry skin, lanugo hair, occasionally yellowish skin and disturbances in gastric motility. In more severe cases, lowered body temperature, lethargy, bradycardia and hypotension are present. With vomiting, there also may be potassium deficiency, dehydration and an elevated BUN and creatinine. Low serum T₃ levels are typically seen, as with any severe weight loss. There may be low total proteins, low plasma zinc, elevated

liver enzymes and an increase in cholesterol. The commonly found low serum estradiol and luteinizing hormone levels are similar to those seen in the prepubertal child. Disturbances in serum cortisol are similar to those seen in depression or chronic stress, with poor suppression with dexamethasone. It is of interest that a 10% increase in weight will often reverse many of these abnormalities.¹⁷⁻¹⁹

The condition may continue untreated for many years unless severe weight loss and weakness render the individual completely ineffective or in medical danger. These patients are often unable to seek help on their own, at times having to be coerced by family or spouse. The older individuals are more often involved in food binges, laxative abuse, diet medication and compulsive stealing. The onset of food binges in a patient with anorexia nervosa points toward a poor prognosis. Mortality rates of 4-25% have been reported in anorexia nervosa.

Bulimia:

Incidence and Course of Illness

The prevalence of bulimia ranges from 3.8% to 14% in various studies, with perhaps 85-90% being women. Some studies indicate that up to 20% of college women are afflicted.20,21 The disorder has now been seen in more than one generation of a family. It may be becoming institutionalized on some college campuses with bulimic individuals forming small groups who eat separately from others, planning their own social activities and indeed forming their own therapeutic groups. This is not just a campus phenomenon-housewives, mothers and career women are now seeking help. Bulimia is typically thought to be an affliction of those in their late teens and twenties, but it is now being seen in the early teens as well. It is possible that this younger group may represent a combination syndrome of bulimia and anorexia nervosa.

Although some bulimic patients have a past history of anorexia, many others begin as overweight, frequently lonely individuals with poor self-esteem. Achievement of normal weight by purging brings increased attractiveness, more friends and feelings of acceptance. These are powerful reinforcers for maintaining the binge-purge behavior. However, this behavior may become compulsive and take on the attributes of an addiction. Although it becomes less enjoyable, the behavior may become necessary as a response to different stresses, frustrations and even boredom. It requires more and more of the individual's time.

It is remarkable how well some of these patients can continue to accomplish everyday tasks and still have several food binges per day. Due to binge-purge behavior, low self-esteem continues. Although many individuals with bulimia are outgoing, their guilt from the bingepurge behavior and their increasing need to hide their behavior from others (sometimes including the onset of stealing, particularly of foodstuffs), leads to further displeasure, anger or sadness. Although these patients understand the unreasonableness of this behavior, they become resentful if others draw their attention to it.

A few patients will have a food binge only infrequently, but the most common pattern in this group is to have a binge at least once a day, consuming up to 3,000 calories in each binge. Most consume more than one food per episode with ice cream, bread and toast, candy and donuts being the most common foods.²²

Many patients use finger stimulation deep in the throat to produce the vomiting, but ipecac has become increasingly popular. Patients report that some pharmacies are now putting the purgative within easy reach for purchase or for stealing. Both the binge and the purge are important to these patients. Most do not recall the amount of food eaten, and they rarely pay attention to the taste of the food. Foods are initially picked for sweetness or for palatability and texture, but later the choice of food may become determined by bulk and availability.

Most of these patients describe the evacuation as the most important object of the vomiting, to release the pressure

TABLE Comparison Between Anorexia Nervosa and Bulimia

	Comparison Between Anorexia Nervosa and Bulimia					
		ANOREXIA NERVOSA	BULIMIA			
1	Weight	25% or less of normal or previous body weight	Within normal weight range			
2.	Eating Disturbance	Severe restriction of food intake, sometimes combined with self-induced vomiting after meals or binges.	Periodic intake of large quantities of food (2,000-3,000 cal.), usually sweets and starches, followed by self-induced vomiting or laxatives.			
3.	Body Image	Grossly distorted view of self as fat even when emaciated	Experiences self as overweight but no perceptual disturbances.			
4	Cognitive Functioning	Intelligence unimpaired but thinking is concrete.	Intelligence unimpaired Can fantasize and think abstractly and symbolically			
5.	Affective Expression	Highly constricted experience and expression of feelings.	Affect is often labile or characterized by anxiety, dysphoria, anger and guilt.			
6.	Self-Esteem	Marked feelings of inadequacy and pervasive ineffectiveness and unworthiness.	Some feelings of inadequacy and/or unstable sense of personal worth and effectiveness.			
7.	Social Relationships	Social discomfort or withdrawal and in- ability to form close personal relation- ships, especially heterosexual.	Social discomfort and isolation at times but able to form some enduring relationships, including heterosexual.			
8.	Self-Control	Extreme, rigid compliance with very high standards.	Alternatives between self-restraint and pronounced impulsivity including stealing and chemical abuse.			
9.	Psychodynamics	Disturbed parent-child relationships result in a poorly developed or false sense of self, denial of affect, personal ineffectiveness, and shallow social relationships.	Disturbed parent-child relationships result in an unstable and insecure sense of self, poorly modulated affect, self-doubt and dependent relationships.			
10.	Family Relations	The family is enmeshed, conflict-avoidant, rigid, overprotective and has confused boundaries. Parents are often estranged in their marriage.	The family is enmeshed, highly conflictual, aggressive, chaotic and has confused boundaries.			

in the stomach. Some will describe a perverse pleasure from the discomfort of almost projectile-like vomiting. While some will reject or deny any general body sensations during the vomiting act, others will describe the bodily sensations as cleansing, stimulating, anxietyrelieving, tension-relieving or occasionally almost a sexual feeling. Most of the patients develop feelings of remorse, lowered self-esteem, disgust and loathing about the act, but an occasional patient will admit to satisfying pleasurable feelings. Most see their activity as quite perverse and something to be hidden, and frequently feel the need to distance themselves from important others because of their activity.23-25

Physical and physiological disturbances appear to be related to the style

of purging. Although they are of normal weight, at times the weight will vary as much as 10 lbs. Occasionally there will be edema of the neck or of the parotid glands. Infrequently there will be calluses on the first and second finger of the hand used for vomiting. Those who vomit chronically will begin to have difficulty with dental hygiene. Abdominal pain and bowel disturbances are common; some of these individuals have been diagnosed as having spastic colon syndromes, before the true etiology is appreciated by the physician. Irregular menstrual periods or fluid and electrolyte abnormalities may occur. The most noteworthy electrolyte disturbances are a low serum potassium and urine chloride. Potassium disturbances are most common in those who also have features of

anorexia. Overloading the stomach leads to occasional mechanical disturbances of the upper bowel. Severe laxative abuse leads to the disturbed bowel functions usually seen with this kind of abuse. However, there are individuals with bulimia who have lived many years with their disorder with apparently little effect on their physical state.²⁶

Etiology

Although both anorexia nervosa and bulimia present with a striking reliability of signs and symptoms, it has been very difficult to delineate a clear-cut organic or psychological etiology. Organic, psychological and cultural variables have all been examined. Amenorrhea, bradycardia, lanugo hair, decreased libido, immunological suppression, en-

docrinological abnormalities, acrocyanosis, hypokalemia and low serum sodium levels with accompanying hypochloremia and alkalosis have focused investigations on the hypothalamus and the pituitary gland.²⁷ However, currently available data would suggest that hypothalamic dysfunction is probably a result of weight loss and that this is most likely responsible for the pituitary changes seen in this patient population.²⁸

Although many psychological mechanisms have been proposed for these disorders, no single mechanism or theory explains the behavior. Problems in psychological separation from parents, difficulties of adjustment at puberty, and fear of loss of control over one's feelings and behavior are all considered to be of importance. Problems with sexual adjustment, failure to satisfy perfectionistic family demands and further impairment of self-concept and self-esteem are consistent observations in both anorexia and bulimia. Bruch and Palazzoli point out very early difficulties in development of identity and selfconcept.29,30 Sugarman and his colleagues describe the individual's struggle with the development of individuality in early separation from the parent. The patient responds to this loss of close attachment to the parent with grief. This response to struggle toward autonomy and independence is similar to that seen in patients with depression.31 Although most patients with eating disorders do not present with severe forms of personality disturbance, some of the more severely impaired individuals do present with borderline personalities. This more difficult group of patients evidence significant difficulties with impulse control and reality testing.

A number of observations also point out the importance of interpersonal factors and the role of the family. Some authors have emphasized the problems in separating from a domineering and controlling mother, and the eating disturbance is considered to be a representation of a desperate attempt at assertion and separation from the mother. 12

Minuchin and his colleagues have delineated four types of dysfunction in families of eating disordered patients. These include enmeshment, overprotectiveness, rigidity and lack of conflict resolution. The problem with anorexia or bulimia is seen as representative of some specific disturbance within the family that prevents adequate maturation of the patient.¹³

In addition to theories emphasizing personal and family pathology, many investigators have studied our current cultural emphasis on the importance of being thin and young in order to be seen as competent and attractive. There is a real conflict concerning the cultural role for women today. Our culture seems to demand passivity and dependence on one hand, and assertiveness and dominance on the other. These conflicting role demands may be sufficiently confusing for some to lead to feelings of rage, impotence and a sense of incompetence, and more primitive attempts at mastery and control over their environment through an eating disturbance.34,35

In summary, organic factors do not appear to be primary in the etiology of either anorexia or bulimia. There are problems with self-esteem and identity which are in conflict with growth toward independence from the family. Many of these patients have feelings of impotence and loss of control stimulated by conflicted family backgrounds and a complex culture. Personal and family demands for perfection of personal appearance and social competence may further exacerbate deficits in self-esteem with a resulting increase in feelings of helplessness and despair. The symptoms of the eating disorder may represent attempts to restore some self-esteem and self-control through demonstrating the ability to control weight and, therefore, to control the self.

Treatment

Treatment of anorexia nervosa and bulimia includes physical stablization, weight restoration and attempts to remedy or ameliorate the psychological problems. Particularly for the patients with anorexia nervosa, the initial focus must be repair of the physical condition and restoration of the weight loss if it is significant. Patients whose laboratory values indicate a lack of metabolic stability or who have lost more than 25% of their ideal weight will frequently require inpatient management to protect them from further physical deterioration. Many patients with bulimia or anorexia who do not demonstrate this degree of physical deterioration can be managed on an outpatient basis, if it is possible to closely monitor their physical status and to offer them proper instructions on nutrition, weight management and the development of healthy eating patterns. The outpatient approach is appropriate if a proper support system is available. This often will need to include individual psychotherapy, problem-focused group therapy and family therapy.

Whether the patient is managed on an inpatient or outpatient basis, attempts must be made to obtain as objective a report on eating habits as possible, and the patient must be able to learn methods for self-control, alternate coping behaviors and assertiveness. It is vitally important to provide some opportunity for identification with healthy role models which may be provided through interaction with a therapist or other group members who are successfully dealing with their problems in group therapy. Mutual support in self-help groups appears to be similar to those approaches used with alcoholics and overeaters. Patients with high levels of anxiety and stress may benefit from relaxation training, biofeedback or hypnotherapy. Antidepressants may be useful and may be part of the specific treatment program for patients with bulimia. 36,37 Major tranquilizers may at times be useful for those with more severe personality abnormalities and with significant problems in reality testing.

Family therapy or marital therapy should be strongly considered. At least transiently, some family intervention is necessary to clarify conflicts within the family and to engage the family in supporting the age-appropriate independence

of the patient. In married patients who present with eating disorders, marital therapy or counseling for the spouse should be very seriously considered.

Long-term statistics are not yet available regarding treatment approaches to patients with anorexia nervosa or bulimia. Recovery rates from anorexia nervosa range from 35% to 88%. Hsu and his colleagues report a good outcome in about 50%. This group had their weight near normal, had regular menstruation, largely satisfactory mental state and psychosocial adjustment. The outcome was variable for another

30%, and poor in 20%. The poor outcome could be positively associated with clinical data such as longer duration of illness, older age of onset and presentation, lower weight during illness and presence of concomitant factors such as bulimia, poor childhood social adjustment and poor parental relationships.¹⁸

Few data are yet available concerning the treatment of bulimic patients. However, resolution of conflicts between important others and the patient, improvement of both self-concept and selfesteem and development of other coping mechanisms for handling anxiety, depression and stress in general all appear to be positively related to a successful outcome of bulimic behavior. Some patients are willing to give up the bulimia; others may be symptom-free for months, with infrequent binges. The provision of a multi-faceted supportive and structured treatment approach shows promise for the long-term management of patients who present with either of these primary eating disorders. Psychiatric consultation should be considered for problems in diagnosis or when treatment efforts toward weight gain and stabilization are unsuccessful.

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Cardio-Pulmonary Resuscitation: Does It Work?

Critical Care Medicine

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N THE LAST 20 years, cardio-pulmonary resuscitation (CPR) has gone from a radical new idea to an accepted part of modern medicine. However, only in the last five years has the technique yielded retrospective scientific data as to its effectiveness in saving lives. The purpose of this review is to look briefly at the history of CPR and to examine the available information in order to answer the question: Does CPR work?

In 1960, the technique of applying external chest compressions was formally introduced into the American literature as an effective means of circulatory support for the cardiac arrest victim. Through the efforts of the American Heart Association, the National Academy of Sciences, and various government agencies, CPR was refined as a technique and accepted widely among health care professionals. In 1973, a national conference on CPR and emergency cardiac care was held. At this conference recommendations were made

for lay training in CPR, certification of CPR providers, nationwide standardization of instruction and quality assurance, and on-going revision of techniques as new information was gathered.

Since then these efforts have led to nationwide acceptance and practice of basic life support (BLS) and advanced cardiac life support (ACLS) as taught by the American Heart Association. Based on a few early studies, the 1980 issue of the Standards and Guidelines for CPR and Emergency Cardiac Care predicted that full implementation of their recommendations would result in 100,000 to 200,000 lives saved each year. Yet while there is no doubt that prompt defibrillation is very effective in the treatment of ventricular tachyarrhythmias, recent studies have cast serious doubt on the value of basic life support techniques.

In today's medical literature numerous studies are available showing survival rates in out-of-hospital cardiac arrests-some involving BLS rescue units, some involving ALS units, and a few comparing both. On the basis of this information it is apparent that delivery of advanced life support to the cardiac arrest victim can result in a long-term average survival rate of 20% (Table 1), which can be broken down to a better survival rate of 30% to 50% for patients with an initial rhythm of ventricular tachycardia or fibrillation and a lower rate of 1% to 5% for patients with bradyarrhythmias or asystole.2,6,7,9 In field arrests with BLS response units (no defibrillation training), however, the long-term survival rate is 60% at best (*Table 2*).

The effect of "by-stander CPR" in three large studies reflects 25% to 43% survival compared to 5% to 21% long-term survival without by-stander CPR (*Table 3*). However, one other study showed no difference in survival with or without by-stander CPR.

The wide range of these findings reflects many variables affecting the final outcome of such a patient in a given community: pathology, rescue unit response time, quality of CPR, quality of ALS, and the quality of the intensive care following resuscitation. Therefore, any evaluation of the effectiveness of basic life support measures must consider these variables. The conflicting data presented in *Table 3* leaves unresolved the question of whether by-stander CPR improves overall outcome in such patients.

Several recent studies have appeared which by their design have shed light on the real effect CPR is having on these patients. In one,* EMTs provided BLS to field arrest victims with an overall long-term survival of 4%. Half way through the study, the EMTs were taught how to defibrillate. The long-term survival rate improved to 19%, approaching the survival in most ALS provider studies.

A fascinating study was done in Winnepeg, Canada¹³ where BLS units without defibrillation capability were equipped with telemetry monitoring. Of 10 patients initially in ventricular fibrillation, only five remained so on arrival to the emergency department: The rest had deteriorated to asystole while receiving CPR. Eight of nine patients with an in-

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TABLE 1

Long-term survival of victims of out-of-hospital cardiac arrest with Advanced Life Support

		• •
Number of Patients	Survival (%)	Reference
352	67 (19%)	2
1,567	302 (19%)	3
38	3 (8%)	4
253	55 (22%)	5
346	51 (15%)	6
611	116 (19%)	7
54	10 (19%)	8
64	12 (19%)	10

TABLE 2
Long-term survival of victims of out-of-hospital cardiac arrest with Basic Life Support only (no defibrillation)

Survival (%)	Reference
1 (4%)	13
33 (4%)	9
1 (0.7%)	4
18 (6%)	5
4 (4%)	8
1 (3%)	10
	33 (4%) 1 (0.7%) 18 (6%) 4 (4%)

itial bradycardic rhythm also deteriorated to asystole during CPR.

The impact of rescue unit use of defibrillation is persuasive as a positive factor in long-term survival of arrest victims. Studies prospectively analyzing arresting cardiac rhythms have provided further prognostic indicators. It is clear that arresting dysrhythmias of ventricular tachycardia (VT) and ventricular fibrillation (VF) connote a better long-term survival rate than asystole, bradyarrhythmias or electro-mechanical dissociation^{2,6,7,9,} (Table 4). One review further observed that VF patients having the best prognosis were those who were cardioverted to heart rates greater than 100/min.

From these several independent studies, it appears that at best the long-term survival rate from out-of-hospital cardiac arrest is 20% with ACLS resuscitation, and 5% with BLS resuscitation.

This gives clinical support to the

widely held and laboratory supported theory that CPR as presently practiced provides little or no blood flow to the coronary circulation. Since blood flow is produced by pressure gradients between the boney thorax and the extrathoracic vessels during closed chest massage, and since there can be no such gradient between the ascending aorta and the coronary sinus, it is not surprising that the heart is probably the most poorly perfused organ in the body during closed chest massage.17 These observations have led to experimental modifications of the basic closed chest cardiac compression technique in an attempt to improve coronary artery perfusion. Chest compression and simultaneous lung inflation with or without an abdominal binder or MAST suit do not improve coronary artery perfusion pressure. These data suggest that merely increasing the intrathoracic pressure during CPR does not significantly increase aortic pressure or decrease right atrial pressure, and therefore does not enhance coronary perfusion.

Another organ which suffers during closed chest massage is the brain. Very little information is available on longterm prognosis for cerebral function in post-arrest patients. One hundred resuscitated patients were reviewed by Abramson, et al., in 1982.14 He found that, of the 21 patients alive at three months' time, only two were still in coma. However, half of the earlier deaths were caused by cerebral failure. Three studies over the past year involving a total of 392 patients undergoing prolonged CPR showed successful resuscitation in 88 of these; however, only 14 were discharged neurologically intact.16 Levy and co-authors reviewed the neurological outcome of 500 patients with non-traumatic coma, of whom 210 patients experienced coma from cardiorespiratory arrest. Only 12 patients (6%)

TABLE 3

Effect of "By-Stander CPR" on survival of out-of-hospital cardiac arrest victims

Number of Patients with	Number of Patients without	Survival Rate with	Survival Rate without		
Bystander CPR	Bystander CPR	Bystander CPR	Bystander CPR	Comment	Reference
TOTAL OF 7	74 PATIENTS	NO DIFFEREN	ICE BETWEEN		
		TWO G	ROUPS		5
166	443	54 (32%)	66 (14%)		7
109	207	47 (43%)	43 (21%)	All Ventricular Fibrillation	11
65	161	16 (25%)	8 (5%)	All Ventricular Fibrillation	9

TABLE 4
Prehospital cardiac arrests: Survival related to arresting dysrhythmia.
(Percentages indicate survival rate from initial arrhythmia.²)

	TYPE OF ARRESTING DYSRHYTHMIA			
		Ventricular Tachycardia	Bradycardia or Asystole	TOTAL
NUMBER OF ARRESTS ADMITTED	200	24	108	352
TO HOSPITAL DISCHARGED	87	21	9	117
ALIVE	51 (23%	16 (66%)	0	67 (19%)

of the 210 cardiac arrest victims survived to achieve independence in daily living.¹⁵

These clinical reports in conjunction with good animal studies reveal that basic CPR has little protective effect on the CNS because it does not provide adequate cerebral perfusion. The best mean arterial pressures obtainable in CPR only represent 10% of pre-arrest carotid blood flow. Furthermore, direct measurement of regional cerebral cortical blood flow during CPR reveals brain perfusion of only 5% to 8% of pre-arrest blood flow.¹⁶

Since 1968 it has been suspected that brain injury during cardiac arrest may be more a function of increased cerebral vascular resistance and post-resuscitation perfusion failure (the "no-reflow phenomenon'') rather than primary anoxic insult to the brain parenchyma itself.18 There is strong evidence that neuronal death does not occur after four to six minutes of cerebral anoxia, and indeed neuronal death is probably related to a complex biochemical cycle of vascular mediators which impair cerebral blood flow itself, and which may well be made worse by CPR. CPR after cardiac arrest delivers acidemic, hypoxic blood to the cerebral cortex which may enhance production of free radicals and calcium ion shifts which may be responsible for on-going cerebral damage even after an effective blood pressure has been

This has led to recent investigations of

the biochemical factors affecting regional carotid blood flow. Research is now focusing on calcium channel blockers and prostaglandin inhibitors as they relate to CNS membrane metabolism, cerebral vascular resistance, and platelet activation. Although a review of these concepts is beyond the scope of this paper, preliminary data suggest a possible "breakthrough" in cerebral resuscitation which may lead to changes in basic CPR technique in the future.

In summary, the widespread practice of basic and advanced life support in a standardized fashion in this country has become a reality as a result of, and as a tribute to, the work of the American Heart Association, the American Red Cross, and the nation at large. The delivery of advanced life support and in particular defibrillation as rapidly as possible is unquestionably the most effective step in saving lives of cardiac arrest victims. Whether the provision of basic life support *prior* to on-the-scene advanced life support is also helpful remains unproven.

Prolonged basic CPR (more than 10 minutes) carries a dismal prognosis in any but the hypothermic arrest victim; however, isolated success stories make it mandatory that any arrest victim receive basic CPR until advanced care is available. Speculations on the possible harmful effects of CPR on the brain have been made, but to date are entirely

conjectural. New methods of CPR are being studied, and these will be reviewed in a subsequent article in this series.

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The Prevention and Treatment of Five Complications of Diabetes

N FEBRUARY 1983, the National Diabetes Advisory Board released for publication A Guide for Primary Care Practitioners. The board believes that all health professionals involved in the care of persons with diabetes should be familiar with the specific recommendations in the guide. This summary is intended to familiarize diabetes health professionals with the general content and availability of the guide prior to its wide dissemination among primary care practitioners. The summary highlights key recommendations for prevention, treatment, and education related to the five complications.

Major strides have been made in the treatment of diabetes during the last decade as a result of biomedical research, technological advances, and improved application of currently available knowledge and resources. It is now possible to limit the severity of the long-term effects of the disease and thus reduce its medical, social and economic impact. Significant clinical information, however, has not yet reached a large number of health care providers who treat patients with diabetes. To correct this situation, information about recent advances in research and standards of care has been incorporated into a state-of-the-art guide designed to help primary care practitioners in the day-to-day management of patients with diabetes.

The development of the guide was recommended by the Diabetes Health Services Conference convened by the National Diabetes Advisory Board in June 1980. During 1981-82 the board sponsored the preparation and publication of this document under the leadership of Charles M. Clark, Jr., M.D. The guide

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was reviewed by representatives of the National Institutes of Health and other selected consultants. It was field-tested among both diabetes specialists and primary care physicians in five states through the Centers for Disease Control, Diabetes Control Program, and appropriately revised prior to publication. The recommendations in the guide, which relate to the detection and prevention of five complications of diabetes (visual impairment, adverse outcomes in pregnancy, foot complications, kidney complications, and acute hyperglycemia and ketoacidosis), emphasize the early application of currently available treatment measures. While issues related to achieving metabolic control are beyond the scope of the guide, the publication is aimed at reducing the incidence and severity of these complications.

The recommendations generally can be implemented in outpatient settings. For each of the complications, discussions are provided on background, prevention, detection and monitoring, treatment and referral, and principles of patient education. The successful application of the recommendations in the guide depends upon a cooperative effort between the health professional and the person with diabetes. To foster this cooperation, patient education materials, office guides, and references are provided as appendices and can be photocopied for use by the physician and patient.

The guide has already triggered the creation of many related instructional materials (e.g., curricula for training courses for primary care practitioners, slide/tape presentations, self-study modules, patient guides, etc.), which will expand its utilization in the primary care community. For information on the availability of the Guide and related materials, please refer to this article and

contact the Centers for Disease Control, Diabetes Control Division, 1600 B Tullie Circle, Atlanta, Georgia 30333.

Visual Impairment

Diabetes is a major cause of blindness in the United States. About 5,000 new cases of blindness related to diabetes are reported annually. After 10 years of diabetes, half of all patients have retinopathy. Although, for the most part, the condition does not affect or threaten vision, in a subset of patients the retinopathy progresses to proliferative retinopathy that threatens vision.

- Detection of retinopathy should be carried out routinely in both type I and type II diabetes. Patients who have had type I diabetes for more than five years and all patients with type II diabetes should have a complete visual history and eye examination with dilated pupils on a yearly basis.
- Patients with extensive background changes, preproliferative, or proliferative retinopathy should be referred to an ophthalmologist who has experience in treating diabetic retinopathy.
 - Hypertension should be controlled.
- All diabetic patients should be aware of the possibility of developing retinopathy, the importance of regular examinations, and the availability of photocoagulation therapy for severe retinopathy. Patients with severe visual impairment should be referred to appropriate rehabilitative services.

The guide contains detailed information on detection, monitoring, and referral of patients with each stage of retinopathy.

Detection and Prevention of Adverse Outcomes in Pregnancy

Each year 10,000 babies are born to diabetic women and 60,000-90,000 babies

are born to women with gestational diabetes. There are significant problems, not only for diabetic women during pregnancy, but for their infants as well. The high morbidity and mortality that threaten diabetic pregnancies can be reduced significantly by careful monitoring and intensive metabolic management.

- For diabetic women of childbearing age, it is important to achieve glycemic control before pregnancy and to plan each pregnancy.
- For pregnant women who do not have diabetes, it is important to screen for the development of gestational diabetes.
- All pregnant women with diabetes should be cared for through a collaborative effort among obstetricians, pediatricians, primary care practitioners, and internists. Care is directed toward achieving normal blood glucose levels in addition to preventing and treating other complications of pregnancy.
- Patients and their families should be informed about the special requirements that are necessary to achieve normal pregnancy and delivery.

The guide gives a detailed schedule for the care of diabetic pregnant women during each trimester.

Detection and Prevention of Foot Problems

Amputations are many times more common among patients with diabetes than among the nondiabetic population. Diabetic foot lesions result from peripheral vascular disease leading to inadequate blood supply and from neuropathy, resulting in reduced sensitivity of the foot. The presence of these conditions makes the feet of the person with diabetes highly susceptible to serious injuries, ulceration, gangrene, infection, and ultimately amputation.

The major treatment is to prevent the development of peripheral vascular disease and neuropathy. Success in saving the foot requires consideration of five factors: (1) prevention or correction of risk factors; (2) removal of vascular obstruction when possible; (3) early and vigorous treatment of diabetic foot le-

sions; (4) patient education in foot care; and (5) teamwork among various medical disciplines.

The acquisition of self-care skills by the patient is critical. Frequent inspection of the feet by both the person with diabetes and the health care provider is the most important aspect of good foot care. Appropriate referral to a podiatrist or orthopedist and use of rehabilitative programs is crucial.

- A complete foot examination should be carried out on all new diabetic patients. Patients with peripheral vascular disease, neuropathy, foot deformities, a history of foot ulcers, and all patients over the age of 40 or with 10-year duration of diabetes should have a foot examination at each visit and at least yearly.
- The health care provider should instruct the patient and/or family member how to inspect the feet, file calluses, cut toenails (stright across), wash feet, use lanolin or polysorb, and eare for lesions. In addition, the potential hazards of heat and cold, new shoes, and going barefoot should be reviewed.
- Expert advice should be sought from a podiatrist, orthopedic surgeon, or a diabetes specialist on an ambulatory or inpatient basis for calluses, some foot deformities, and neuropathic or vascular ulcers as appropriate.

The guide contains a detailed discussion of a complete foot examination and referral recommendations for various conditions.

Detection and Prevention of Kidney Problems

About 4,000 new cases of end-stage renal disease occur in diabetic patients each year. These account for one quarter of all new cases of end-stage renal failure. In diabetic renal disease, proteinuria is usually the first clinically apparent abnormality. Poor glucose and blood pressure control may further aggravate renal damage.

• For patients with functional kidneys, hypertension and infection should be vigorously sought and treated to preserve renal function. Nephrotoxic

agents should be avoided.

- A urinalysis should be obtained on all new patients. In any diabetic patient over 40 and in all those with diabetes for 10 or more years duration, a yearly urinalysis should be performed.
- For patients whose urinalysis indicates proteinuria, serum creatinine and/or BUN should be obtained at least yearly.
- When the serum creatinine is greater than 3 mg/dl, the patient should be referred to a nephrologist for evaluation.

The guide outlines other important treatment measures, education principles related to stages of renal functions, and options for treatment of end-stage renal disease.

Detection and Prevention of Acute Hyperglycemia & Ketoacidosis

Diabetic ketoacidosis (DKA) and the acute metabolic decompensation that precedes it are severe but often preventable complications of diabetes caused by an insufficient level of circulating insulin. When DKA occurs, insulin deficiency is usually accompanied by stress, fever, catabolic hormone excess, and/or dehydration. In older patients, hyperglycemia, with subsequent dehydration and coma, can occur without ketosis (hyperosmolar nonketotic coma).

- Prevention measures include (1) early identification of patients with diabetes; (2) adequate patient treatment of intercurrent illness; (3) improved adherence of patients to the prescribed regimen; and (4) identification of glycosuria and dehydration by family members or health care providers in older patients who may not be able to recognize the symptoms of hyperglycemia.
- At the onset of diabetic ketoacidosis, a diligent search should be made for precipitating and complicating factors and appropriate treatment should be initiated. Consultation with a diabetologist is encouraged, especially for those patients with repeated episodes of DKA.

The guide details explicit sick day instructions along with selected references.

Increased Mortality Following Repeal of Mandatory Motorcycle Helmet Law

Abstract

The effect of the repeal of mandatory motorcycle helmet legislation in Indiana, effective Sept. 1, 1977, was assessed by comparing fatality statistics from 1962 through 1981. Prospective data were also obtained by the Indiana State Police regarding helmet usage and injuries sustained during the period immediately prior to and one year following repeal of the helmet law. The death rate per 1,000 accidents rose from 20.3 in 1974-77 to 27.8 in 19/8-81, an increase of 36.9%. In the same periods, the death rate per 100,000 registered motorcycles increased 43.1% from 59.8 to 85.6. Helmet usage declined from 75.6% immediately prior to the repeal to 36.8% in the year after repeal of the law.

Assessment of injuries indicated that a significant number of injuries may have been prevented or reduced by the use of helmets. Recent legislative action in Indiana, effective Jan. 1, 1984, applies to a limited segment of the motor-cyclist population. Experience in other states indicates this will have limited impact on injuries and mortalities. The data presented argue for the passage of a new mandatory requirement for the use of helmets in Indiana.

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N JULY 1, 1967, Indiana passed a law requiring motorcyclists to wear helmets; the law was repealed effective Sept. 1, 1977, in spite of grave concerns voiced by physicians and others interested in safety. To assess whether these concerns were justified and to measure the impact of this legislative action, we reviewed the injuries and deaths resulting from motorevele aceidents before the law, during the time in which it was in effect, and for a period thereafter. In addition, we assessed the use of helmets and the effect of their usage on morbidity and mortality resulting from these accidents.

Materials and Methods

Deaths due to motorcycle accidents in Indiana which occurred from 1962 through 1981 were reviewed generally, and detailed data were collected for accidents occurring in the summers just before and after repeal of the law. Data were collected by the Standard Summary of Motor Vehicle Traffic Accidents Form for the State of Indiana for two-wheel motor vehicles for each calendar year from 1962 through 1981. Annual data on motorcycle registration and census were also tabulated.

When the Indiana Mandatory Helmet Law was repealed by the 1977 General Assembly, a review of the information collected on the standard accident report showed the lack of certain pertinent data in regard to helmet usage and to injuries incurred in motorcycle accidents. For this reason, all Indiana State Police troopers who investigated motorcycle accidents collected additional information on

helmet usage and whether or not its use or lack of use affected the injuries sustained during two periods of detailed study. The first of these periods was May through August of 1977, just before repeal of the law; the second period was May through August of 1978.

State troopers investigate approximately 10% of all accidents in Indiana. Since these accidents are randomly scattered over all 92 counties in the state, these data are felt to be a fair sample of all accidents occurring during the periods of study.

Results

The data concerning fatal accidents were grouped into four periods for the purposes of comparison (Table 1). Period I are the data from years 1962 through 1967 and represents the period in which no laws were in effect regarding helmet usage or reductions of speed limit. Period II are the data from the years 1968 through 1973 and represents the period in which only mandatory helmet legislation was in effect. Period III are the data from 1974 to 1977 and represents the period in which the mandatory helmet law and the reduction of the speed limit to 55 MPH was in effeet. Period IV are the data from the years 1978 through 1981 and represents the period following repeal of the mandatory helmet law.

The number of deaths per 100,000 registered motorcycles increased from 59.8 in Period III to 85.6 in Period IV (43.1%, p<.05.) A similar significant increase occurred in the death rate per 1,000 accidents: from 20.3 in Period III to 27.8 in Period IV, or 36.9% (p<.05). During the period of comparison, the number of motorcycles registered increased at a rate of 11.4% per year, while population increases averaged less than 1% per year.

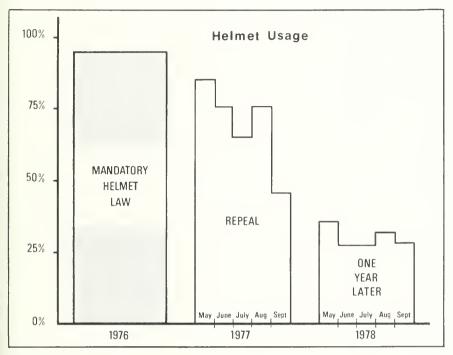


FIGURE 1: Helmet usage in Indiana.

Examination of the data gathered prospectively in the two study periods showed that the mandatory helmet law was strictly enforced prior to its repeal and that the usage of helmets was as high as 95% prior to legislative action in the early spring of 1977. In the study period of May through August of 1977, which was after the legislature acted but prior to the effective date of repeal, only 75.6% of the cyclists were wearing helmets when accidents occurred, and this percentage decreased to 36.8 during the same months in the following year (Figure 1).

Furthermore, assessment of the nature of the injuries and the circumstances of the accidents which occurred during these two periods of detailed study indicated that helmets prevented or reduced injuries in 77% of accidents in which they were worn and would have prevented or reduced injury in 24% of those in which helmets were not worn.

Discussion

The law mandating use of motorcycle helmets by cyclists was prompted by the Highway Safety Standard #3 of the

Highway Safety Act of 1966, which called for the use of approved helmets and eye protection in the operation of motorcycles. Subsequently, on July 1, 1967, motorcycle helmets were required of all motorcyclists in Indiana. On March 1, 1974, Indiana enacted legislation which reduced the maximum speed limit to 55 MPH.

The combined benefit of the motorcycle helmet law and the 55 MPH speed limit was a decline in deaths per 1,000 accidents of 12.9% and a reduction in the death rate per 100,000 registered motorcycles of 41.0%.

However, the Highway Safety Act of 1976, which prohibited the federal Secretary of Transportation from issuing sanctions against states failing to enact laws or regulations providing for the use of a helmet for anyone 18 years of age or older, led to the repeal in Indiana of the mandatory helmet law effective Sept. 1, 1977. The negative effect of this action resulted in dramatic increases in the death rate per 1,000 accidents (36.9%) and in the death rate per 100,000 registered motorcycles (43.1%).

The experience in Indiana has not been unique.³⁻¹⁰ In North Dakota, helmetless riders were 3.19 times as susceptible to fatal injuries as those wearing helmets.⁴ In a Kansas study, the repeal of the mandatory helmet law resulted in a 63.3% increase in fatalities per 1,000 accidents and a 95.5% increase in fatalities per 1,000 motorcycle registrations.¹¹

In a summary of 26 helmet law changes that occurred between January 1975 and December 1978, Watson, et al, found that 23 of these resulted in a greater number of deaths in the period following repeal or weakening of the law than were predicted to occur if the law had not been changed. It was estimated that the repeals or weakening of motorcyclist helmet use laws were typically followed by almost 40% increases in the fatally number of injured motorcyclists.12,13

TABLE 1 Deaths from Motorcycle Accidents in Indiana						
Period	Years and Conditions	Death Rate per	Death Rate per 100,000 Registrations			
1	1962-1967	23.3	101.2			
11	No Laws 1968-1973	22.4	71.8			
III	Helmet Law 1974-1977	20.3	59.8			
	Helmet Law 55 MPH Law					
IV	1978-1981 Repeal Helmet Law	27.8	85.6			
	55 MPH Law					

Robertson compared fatality rates in eight states that adopted helmet use laws to those in eight matched states that did not adopt such laws. He concluded the following:

"The overall fatal involvement rate for eight states that enacted helmet use laws declined from more than 10 per 10,000 registered motorcycles the year before the laws' enactment to about 7 per 10,000 registered motorcycles both in the years of enactments and the following years. In contrast, the average fatal involvement rate in the eight matched states that enacted no helmet laws at the time that their comparison states did so remained at about 10 per 10,000 registered motorcycles throughout the period studied." ¹⁴

The decrease in helmet usage with the repealed law is also not unique to Indiana. A total of 17 helmet use surveys were conducted in 13 states during 1975-78. 12 In the five survey states where these laws applied to all motorcyclists, helmet use rates were found to be over 98%. In the absence of universal helmet laws, rates varied between 25 and 61% in the nine states surveyed, 48% being the average. 3

In states where the helmet use laws applied to a limited segment of the population of motorcyclists, such as those under age 18, only 55% of these young riders were observed to be in compliance with the law.^{4,15} Limited helmet laws apparently are disregarded by the population at which they are directed and also place police officers in undue jeopardy by expecting them to judge drivers' ages in addition to enforcing helmet usage.⁴

That helmet usage can prevent or reduce injury has been shown in previous studies. In Iowa, for example, the incidence of head injuries attributed to motorcycle and moped accidents was 38.9% before the mandatory use of helmets and decreased to 23.5% when the helmet law was in effect. With repeal of the law, it rose to 40.4%. Also, McSwain and Lummis found a 51% increase in the incidence of head injuries per 1,000 accidents and a 67% increase in the overall Abbreviated Injury Scale injury per 1,000 accidents in Kansas after

TABLE 2
Motorcycle Helmet Laws in the United States*

NO REQUIREMENT FOR HELMETS: 7 STATES

California Iowa Colorado Nebraska Connecticut Washington

LIMITED REQUIREMENT: 24 STATES**

Alaska (18) New Mexico (18)
Arizona (18) North Dakota (18)

Delaware (18) Ohio (18 and first year operators)

Hawaii (18) Oklahoma (18) Idaho (18) Oregon (18)

Indiana (18)*** Rhode Island (passengers only)

Kansas (18) South Carolina (18)
Maine (16 and passengers) South Dakota (18)

Maryland (18) Texas (18)
Minnesota (18) Utah (18)
Montana (18) Wisconsin (18)
New Hampshire (18) Wyoming (18)

MANDATORY REQUIREMENT ALL RIDERS:

Remaining 19 states District of Columbia Puerto Rico

- * Source: National Highway Traffic Safety Administration—May 1983
- ** Maximum age or other condition for mandatory use in ().
- ***See text for exact wording.

the repeal of the helmet use law."

In North Dakota, helmetless riders suffered head, neck and facial trauma 2.3 times as often as their helmeted counterparts; and the number of injuries and the severity of trauma were significantly higher for those individuals not wearing helmets. In addition, Watson *et al*, demonstrated statistically that if helmeted and non-helmeted riders have similar crashes, death from head injury is twice as frequent as death from other causes when helmets are not worn.

The financial burden associated with this severe trauma in the motorcyclists is impressive. Studies have demonstrated that the average costs (excluding physicians' fees) for treatment of motorcycle injuries are greater than \$10,000° and that the taxpayer may incur greater than

50% of the costs of the injured motorcyclist.6

Muller has found that the costs of associated additional medical care for unhelmeted injured cyclists substantially exceed cost saving produced by reduced helmet use. It is estimated that helmet law repeals may result in \$16 to \$18 million of unnecessary medical care expenditures annually. Furthermore, at least \$61 million could be saved annually, nationwide, if all motorcyclists were to use helmets.¹⁷

In an era in which reduction of the cost of medical care has become a slogan embraced by virtually all politicians, most labor unions, and increasing numbers of large businesses, it is surprising that these data generate so little evident concern. The alleged restriction of

individual freedom caused by such laws apparently generates more emotion than the corporate restrictions of freedom resulting from high taxation and costs of medical insurance. However, the arguments of "individual rights" of motorcyclists are hollow. As a Massachusetts court told a cyclist objecting to the states' helmet use laws (and the U.S. Supreme Court later affirmed):

"While we agree with plaintiff that the act's only realistic purpose is the prevention of head injuries incurred in motorcycle mishaps, we cannot agree that the consequences of such injuries are limited to the individual who sustains the injury ... The public has an interest in minimizing the resources directly involved. From the moment of the injury, society picks the person up off the highway; delivers him to a municipal hospital and municipal doctors; provides him with unemployment compensation if, after recovery, he cannot replace his lost job, and if the injury causes permanent disability, may assume the responsibility for him and his family's subsistence. We do not understand a state of mind that permits plaintiff to think that only he himself is concerned."18

In spite of the numerous studies to date, the controversy surrounding the mandatory helmet law continues^{19,20} and numerous solutions have been offered.^{21,23} In this arena, the respective state legislatures across the country have not acted in favor of reducing this mortality as currently fewer than 50% of the states have a mandatory helmet law for all motorcyclists and seven states have no helmet requirement whatsoever (*Table 2*). In Indiana, however, enough motorcyclists may have died since repeal of the mandatory helmet law to provoke some action.

On April 15, 1983, the Governor of Indiana signed the Child Restraint Systems bill with its rider, Senate Enrolled Act Number 172, which requires:

"... when a motorcycle is being driven or operated by a person who is younger than 18 on public streets, that, the driver and passengers shall (1) wear helmets and (2) have eye protection devices in their possession."24

It is obvious that such a limited requirement will not apply to all those under age 18 (unless the motorcycle *driver* is also under 18) and that the results of this action will also be limited compared to the results that could accrue from a requirement for all motorcyclists to wear helmets.

Conclusion

The repeal of the mandatory motorcycle helmet law in Indiana on Sept. 1, 1977 had the following certain effects:

- The use of motorcycle helmets in Indiana decreased from 75.6% during the summer of 1977 to 36.8% during the summer of 1978.
- There was an increase of 36.9% in the death rate per 1,000 accidents and an increase of 43.1% in the death rate per 100,000 registered motorcycles in the four-year period following repeal of the helmet law as compared to the same period prior to the repeal.

This profound loss of life and its attendant consequences argue for passage of a new requirement for the use of helmets in Indiana.

If physicians are to blame for runaway medical costs, perhaps they should become more active in persuading their law makers to study data such as these.

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Ruptured Thoracic Aorta Aneurysms

An Alternative Operative Treatment for This Surgical Emergency

HARRY SIDERYS, M D BRIAN HAAG. M D Indianapolis

Abstract

Rupture of a descending thoracic aortic aneurysm is a catastrophe that carries a dismal prognosis. Two patients with this problem, who are described, were successfully treated with techniques simpler than the standard interpolation of an aortic graft.

NIREALLD ANELRYSMS of the thoracic aorta carry a high mortality rate. Like abdominal aneurysms, the natural history of thoracic aortic aneurysms is to eventually rupture.

The classic operation for thoracic aneurysm involves sewing a graft into the neck of the aneurysm both above and below the aneurysm. Commonly, a temporary bypass shunt is used from the aorta or heart proximal to the occluded aorta to aorta distal to the aneurysm. This serves to raise the pressure in the distal aorta and protect the distal organs and spinal cord.

Ruptured or leaking aneurysms of the thoracic aorta represent a dire emergency in which a clamp must be applied proximal and distal to the leaking aorta without delay. At this point it would seem that the simplest effective procedure be done to solve the problem at hand.

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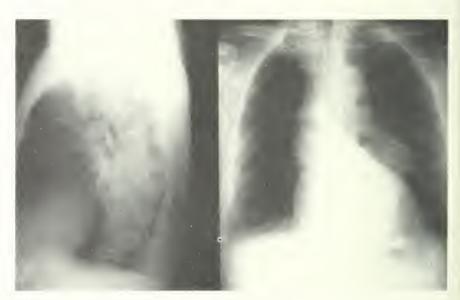


FIGURE 1: X-rays of chest day prior to admission show aneurysm of the descending thoracic aneurysm.

We would like to present two patients with leaking thoracic aortic aneurysms who were treated by techniques other than sewing in a plastic graft.

Case 1

A 79-year-old man was admitted to the hospital in shock complaining of severe chest pain. The previous day he had been seen complaining of back pain and a chest x-ray revealed a thoracic aneurysm (Figure 1). He refused hospitalization.

After admission the next day a chest x-ray revealed new free fluid in the left hemithorax (Figure 2). He was taken immediately to surgery with a diagnosis of leaking thoracic aneurysm and placed on femoral bypass. A left thoracotomy revealed a liter of free blood in the pleural space. The aorta was clamped above and below the aneurysm and a 25mm in-

traluminal graft of the Lemole type was quickly tied in place and the aortic aneurysm was repaired over the graft. Total cross clamp time was less than 30 minutes.

For the first 10 days the patient's course was without complication (*Figure 3*). He was on the open floor, out of bed and active when he suffered a stroke. He died three months after surgery of complications related to the stroke.

Case 2

A 50-year-old man was admitted to the hospital complaining of severe chest pain radiating to the back. He was in shock. An aortogram revealed a ruptured thoracic aortic aneurysm just above the left diaphragm (*Figure 4*). He was taken immediately to the operating room and a left thoracotomy revealed a ruptured



FIGURE 2: The following day, a large left pleural effusion heralds leaking of the thoracic aortic aneurysm.



FIGURE 3: Postoperative chest x-ray shows ringed intraluminal prosthesis in place of the thoracic aortic aneurysm.



FIGURE 4: Descending thoracic aortogram shows aortic aneurysm. Pleural effusion gives evidence of leaking aneurysm.



FIGURE 5: Postoperative aortogram after aortic wrapping depicts satisfactory repair.

thoracic aortic aneurysm with free blood in the pleural space. The aorta was clamped, above and below the aneurysm. The aneurysm was repaired with sutures, the aorta was unclamped and then the entire aneurysm was wrapped with Dacron cloth, decreasing the size of the aneurysm to that of the aorta. Post-op aortogram revealed no evidence of leak or dilatation of the aorta (*Figure 5*). X-rays two years after surgery revealed no evidence of recurrent aneurysm.

Discussion

Two techniques for the surgical treatment of rupture of the descending

thoracic aorta are described. One utilizes an intrahuminal graft made of woven tubular Dacron with cloth-covered grooved rings at each end. This was recently described by Lemole. The basic technique consists of inserting the whole ringed graft into the true lumen of the aorta and circumferentially ligating the aorta against the groove in the rings. The second involves wrapping the aorta with Dacron material. This old technique has recently been revived by Robicsek.

These two techniques, which are simpler and less time consuming than the standard graft placement, lend themselves particularly well to the emergency situation in which the thoracic aneurysm is leaking or ruptured. If these techniques stand the test of time, they will also become important in the treatment of selected elective aortic aneurysms.

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The Royal College of Surgeons of England

AUSTIN L. GARDNER, M.D. DANIEL R. LE GRAND, M.D. Indianapolis

The November 1983 issue of the *Annals of the Royal College of Surgeons of England* (London) contained six articles of particular interest. Following are abstracts of those articles.

In "The Use of Pedicled Transplants of Sigmoid or Other Parts of the Intestinal Tract for Vaginal Construction" by J.C. Goligher of Leeds, the experience with this procedure world wide is reviewed. It was first introduced in the United States in 1911 and is superior to perineal procedures. Professor Goligher detailed the technique of isolating a segment of sigmoid and described long term follow-up of satisfied patients and presumably satisfied spouses.

* * *

The observation by C.J. Cahill and others of Royal Surrey County Hospital on "Invasive Breast Cancer—The Tip of an Iceberg" that multiple primaries were found in 20% of 127 patients, the concept of mastectomy to facilitate planning of adjuvant treatment was apparent.

"On History of Scrotal Cancer" by H.A. Waldron, recalled that Percivall Pott described the prevalence of the condition in chimney sweeps in 1775. Because it seldom presented before puberty, it was confused with venereal disease. The incidence in workers exposed to coal and distillates was significant and the correlation with the chimney sweep exposure reads like a detective story. The solvent-refined oils are less carcinogenic.

* * *

In letters to the editor, the paternity of operative surgery by El Zahrawi is challenged by a surgeon from India pointing out that Susruta performed rhinoplasty, vesical lithotomy, cataract removal, tonsillectomy and closure of intestinal wounds in the 8th and 9th Centuries, B.C.

* * *

In "Ureteric Obstruction After Dacron Vascular Replacement," John M. Thomas, Surgical Registrar from Royal Devon and Exeter Hospitals, reviewed 11 patients retrospectively and 24 prospectively to determine the incidence of ureteric obstruction. No evidence of abnormal renal function could be demonstrated and only one minimally dilated ureter was found on IVP. Thirty-two cases of ureteric obstruction reported

in the literature were then reviewed.

The author concluded that the complication is indeed uncommon and no particular advantage can be demonstrated in positioning the ureters either behind or in front of the grafts. His final recommendation was to discourage routine IVP and reserve it for those patients with symptoms of ureteric obstruction.

* * *

John F. Chester, et al, of Royal South Mants Hospital, Southampton, in "The Effect of Cephradine Prophylaxis on Wound Infection After Arterial Surgery Through a Groin Incision," demonstrated a significant reduction in wound infection when a prophylactic antibiotic was utilized. Thirty-live patients underwent evaluation in a randomized prospective study. No patient receiving antibiotics developed an infection compared with 15% in the untreated group.

The importance of groin lymphatics in draining a distal infected focus and their damage by the groin incision was underscored by the fact that 80% of the infected wounds occurred in operations performed for rest pain and gangrene. A larger number of patients were called for in the initial study design but evaluation after 35 patients revealed too significant a difference to proceed ethically.

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Consumers Warned of Misleading Sales Tactics Involving Home Water Treatment Equipment

The Indiana State Board of Health is warning home owners that some home water treatment equipment salesmen may be using overly aggressive and seriously misleading tactics in persuading them to buy such units.

The equipment being sold "amounts to nothing more than conventional ion-exchange water softeners and carbon filters," the ISBH said. Certain salesmen, however, are telling home owners that their equipment removes carcinogenic compounds in drinking water and therefore reduces the risk of contracting cancer.

Among the sales pitches:

- "You know how contaminated the water in Indiana is . . ."
- "You know how lax the regulations are in Indiana . . ."
- "By the time you drink it, your water has been used eight or ten times . . ."

In addition, some salesmen claim they are with the local water company and are offering free drinking water tests for consumers. This bogus "water company" representative then comes to the house, tests the water, and invariably tells the consumer the water is bad and he needs a home filtration unit.

Another favorite ploy is to show the consumer pictures of an obviously contaminated pond of water, and then claim this water is the consumer's source of drinking water. Currently, salesmen in the Indianapolis area are showing pictures of a downtown canal, which is stagnant and of no use to anyone, and claiming this is a source of drinking water for Indianapolis residents. "Nothing could be farther from the truth," the ISBH says, but the fabrication has worked.

The ISBH says it is unaware of any public or private water supply in Indiana that currently poses a health risk to con-



sumers. All drinking water supplies in the state are well within the accepted guidelines provided for in state and federal water quality regulations.

Moreover, the ISBH points out that, even if there were carcinogenic materials in drinking water, no ion-exchange water softener—or any other home filtration unit, for that matter—would be capable of filtering out those kinds of materials.

"The benefits to the consumer of buying a home water softener are esthetic and economic," the ISBH says. "There are no known systems on the market that can filter out harmful chemicals, as claimed by these salesmen." The State Board of Health says it has no objection to water softener salesmen who legitimately market their product; it is the scare tactic of "contaminated water" that is objectionable.

The ISBH recommends:

- That, before buying a domestic water treatment unit, the prospective buyer should check the credentials of the supplier and check with the Better Business Bureau or the Consumer Protection Division of the Attorney General's Office about complaints that may have been filed about the product or the company; information about the equipment can also be obtained from the supplier's sales office;
- That the prospective buyer contact the local water department/company to determine if the sales person's claims about water quality are accurate, or if information being given is misleading; and
- That consumers with questions about water quality in their area call the ISBH's Division of Public Water Supply at (317) 633-0787.

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For nearly a hundred years, the Statue of Liberty has been America's most powerful symbol of freedom and hope. Today the corrosive action of almost a century of weather and salt air has eaten away at the iron framework; etched holes in the copper exterior.

On Ellis Island, where the ancestors of nearly half of all Americans first stepped onto American soil, the Immigration Center is now a hollow ruin.

Inspiring plans have been developed to restore the Statue and to create on Ellis Island a permanent museum celebrating the ethnic diversity of this country of immigrants. But unless restoration is begun now, these two landmarks in our nation's heritage could be closed at the very time America is celebrating their hundredth anniversaries. The 230 million dollars needed to carry out the work is needed now.

All of the money must come from private donations; the federal government is not raising the funds. This is consistent with the Statue's origins. The French people paid for its creation themselves. And America's businesses spearheaded the public contributions that were needed for its construction and for the pedestal.

The torch of liberty is everyone's to cherish. Could we hold up our heads as Americans if we allowed the time to come when she can no longer hold up hers?

Opportunities for Your Company.

AL You are invited to learn more about the advantages of corporate sponsorship during the nationwide promotions surrounding the restoration project. Write on your letterhead to: The Statue of Liberty-Ellis LIBERTY Island Foundation, Inc., 101 Park Ave, N.Y., N.Y. 10178.

Save these monuments. Send your personal tax deductible donation to: P.O. Box 1986, New York, NY. 10018, The Statue of Liberty-Ellis Island Foundation, Inc.

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CME QUIZ.

TO OBTAIN ONE HOUR OF CATEGORY 1 AMA CME CREDIT, answer the following questions by circling the correct answer on the answer sheet below. Complete and clip the application form and mail it to: Indiana University School of Medicine, CME Division, Fesler Hall 224, 1120 South Dr., Indianapolis 46223.

Anorexia Nervosa and Bulimia

CONTINUED FROM PAGES 241-245

Please choose the one best answer for each question. The first four questions pertain to the same case.

- 1. A 16 year-old cheerleader with amenorrhea for the past several months has been
 brought to the office by her mother. She
 is noted to be 5'4'' and weighs 102 lbs.
 Her previous stable weight was estimated
 at 120-125 lbs. The mother worriedly
 says the weight loss seemed to start with
 the cheerleading at the beginning of the
 season. The patient says she looks and
 feels just fine. Chest x-ray is not informative, electrolytes are within normal
 limits and the total protein is within the
 low normal range.
 - The patient's marked weight loss and amenorrhea are most likely due to the cheerleading.
 - b. Since the patient has no personal complaints there is no problem.
 - c. The only concern is the possibility of pregnancy.
 - d. Further history and observation are necessary to rule out an eating

disorder.

- The cheerleader is initially vague in discussing her weight loss and amenorrhea, but becomes quite irritated when pressed to describe her food intake. She sees herself as too busy with cheerleading and school work to have a boyfriend.
 - She is probably minimizing having a boyfriend because she is worrying about pregnancy.
 - b. Her defensiveness about food intake is typical of teenagers.
 - c. Careful monitoring of her diet and weight appear necessary.
 - d. The only problem is approaching the family about the possibility of a pregnancy.
- The cheerleader privately admits to the office nurse that others are overly worried about her weight and that the concern has drawn her mother and father closer together.
 - a. The main problem is a conflict between the parents.
 - b. Serious consideration must be given

to the possibility of anorexia nervosa.

- c. The patient probably became pregnant to get back at her parents.
- d. Only an endocrine workup is indicated since this is probably a pituitary disease.
- 4. Over the next two weeks the patient insists she is eating well but no one has seen her eat more than about 600 calories per day. She now weighs 99 lbs. She insists her appearance is good, but her mother reports that school friends are all talking about her emaciated look. All the following are true except:
 - There is need to consider hospitalization for further observation and nutritional control.
 - Appropriate consultation may be indicated to initiate individual counseling and group therapy.
 - c. If she is hospitalized there is no need to alert hospital staff to possible vomiting or laxative abuse.
 - d. Some kind of emotional support and counseling may be necessary for the parents.
- 5. The following statements regarding anorexia nervosa are true *except*:
 - a. The disorder appears more common in affluent societies.
 - b. The disorder may go "undetected" for many years.
 - c. Some patients may become bulimic.
 - d. This is a fairly innocuous disease with a very low mortality rate.

CONTINUED ON PAGE 288

MARCH CME QUIZ Answers

Following are the answers to the CME quiz that appeared in the March 1984 issue: "Child Abuse," by Deborah D. Radecki, M.D.

1. c 6. e 2. c 7. d 3. d 8. a 4. d 9. e 5. d 10. d

Answer sheet for Quiz: (Anorexia. . .)

 1. a b c d
 6. a b c d

 2. a b c d
 7. a b c d

 3. a b c d
 8. a b c d

 4. a b c d
 9. a b c d

 5. a b c d
 10. a b c d

I wish to apply for one hour of category 1 AMA Continuing Medical Education credit through the I.U. School of Medicine. I have read the article and answered the quiz on the answer sheet above. I understand that my answer sheet will be graded confidentially, at no cost to me, and that notification of my successful completion of the quiz (80% of the questions answered correctly) will be directed to me for my application for the Physician's Recognition Award of the American Medical Association. I also understand that if I do not answer 80% of the questions correctly, I will not be advised of my score but the answers will be published in the next issue of Indiana Medicine for my information.

ame	(please	print	or	type)
	(predice	1	-	JP-

Address

Identification number (found above your name on mailing label)

Signature

To be eligible for this month's quiz, send your completed, signed application before May 10, 1984 to the address appearing at the top of this page.

EDITORIALS

Toward Quality Care

Righting the health care system will require a joint effort by employers, unions, insurance companies, legislators, consumers and hospitals.

"We are all guilty of fueling the high cost of health care. Fed by the lack of financial restraints and the conviction that health care was a God-given right, we have become a nation of hypochondriacs, bent on a quest for immortality."

These beliefs were expressed recently by John C. Bedrosian, senior executive vice president for National Medical Enterprises, the nation's leading health care providers, currently owning, operating or managing 366 acute, psychiatric and long-term care hospitals with nearly 45,000 beds.

Bedrosian lists the factors which lead to escalating costs. He starts with the "Great Society" Medicare cost-based reimbursement system, then adds insurance companies that reinforced this open-ended system. The "malpractice craze," inflation (which caused more than two-thirds of the increase), liberal employee benefit programs that insulated consumers from the true cost of care, and the lack of a national health policy are all Bedrosian factors.

He believes that hospitals, while part of the problem, are not the cause of the high rise in care costs. He thinks that in the future there will be a major redefining of the roles of hospitals, physicians and patients coupled with a more competitive environment and a more business-like atmosphere for hospitals that survive.

"Health care in America will always be expensive. It cannot be otherwise," Bedrosian said. The aging population consumes four times as much care as the rest of the people. "In 1983 alone, more than 40% of Medicare funds were spent on patients in their final year of life."

In light of the above truths, Bedrosian says that the only scheme to bring down health care costs would be to halt medical research and development or to limit access into the system.

Actually, he believes that competitive market forces, slowing inflation and introducing new efficiencies and incentives will temper escalation in the future. He also states that, even with all the necessary changes, the quality and availability of care will improve.

However, he says, in this era, "all of us will have to give up a little. Gone will be the perception of health care as a free birthright."

He stresses that, as users of the "best health care system in the world," the American public will need to reshape some of its thinking and become increasingly more discriminating in the proper selection of appropriate medical care. Employers, he says, should reexamine health benefit packages and ensure they contain incentives for prudent use, and that they investigate preferred provider organizations and consider membership in business coalitions.

Formation of a national health care policy will require a spirit of "greatest cooperation" among legal, medical, government and administrative leaders in the health care industry, according to Bedrosian. He is sure that the future will see real competition in the hospital industry, something that has been lacking in the past.

Livestock Antibiotics

No threat to human health has been demonstrated to result from the use of antibiotics as animal feed additives over the past 30 years.

Subtherapeutic doses of penicillin and/or tetracycline improve an animal's health and make possible the production of marketable products in shorter time. Economic gains as high as \$3.5 billion per year are accomplished.

These are the principal conclusions of a report from the American Council on Science and Health.

According to the council's associate director, Dr. Richard A. Greenberg, "During the more than 30 years in which antibiotics have been used as animal feed additives, no human health problems attributable to this practice have been reported. There have been no known outbreaks of untreatable bacterial disease as a result of feeding low doses of antibiotics to livestock, not even among farmers, slaughterhouse workers, or other groups of people who come into contact with farm animals daily."

"The feeding of antibiotics to farm

animals does pose a theoretical health risk," Dr. Greenberg continued. "Fortunately, though, we don't have to rely on theory alone to determine whether this risk is a significant one. We also have a large body of evidence from practical experience. The widespread use of low doses of antibiotics in livestock feed during the past three decades has provided us with a 'natural experiment' on an enormous scale. The 30-year record of safety that has come out of this 'experiment' is strong evidence in favor of permitting the addition of antibiotics to livestock feeds to continue."

Antibiotics, used in small doses (subtherapeutic), prevent disease in some small animals. In all animals small doses also increase the rate of weight gain, increase the amount of meat produced by a given amount of feed, and help to prevent bacterial diseases.

Several theories are advanced to explain the remarkable effect of such small doses. One theory is that antibiotics exert a preventive or disease control effect. Another theory is that antibiotics exert a "nutrient-sparing effect" due to change in the types of microorganisms in an animal's intestine. The predominant organisms, it is postulated, may be able to produce vitamins and spare the nutrients in the feed for absorption and muscle gain. It is observed that the intestinal wall in antibiotic-fed stock is thinner and may transmit nutrients more efficiently.

Still another theory is that there is a "metabolic effect," by which the antibiotic affects the animal's own body functions. No consensus is evident as to which of these assumptions is correct, if any of them are. Also it is realized that the beneficial effect may be due to two or more of the theoretical actions or to a combination of them all.

Most of the ingested antibiotic is excreted in the bowel and very little of the drug reaches the tissues. The risk of producing an anaphylactic reaction in a human because of eating animal products containing small residues is extremely small.

Residues in animal tissues clear out quickly when the drug is stopped. The law requires livestock and poultry producers to wait for specified withdrawal periods after giving an animal antibioticcontaining feed (or after administering therapeutic antibiotics) before the animal may be slaughtered, or allow its eggs or milk to be used as food.

Antibiotics are not allowed in the feed given lactating dairy cattle.

Low doses of antibiotics decrease the antibiotic-sensitive bacteria in the animal's GI tract and increase those bacteria which are antibiotic resistant. Careful studies have been conducted to determine whether a human disease might result from contamination of meat or eggs from animals raised on feed containing low doses. No such circumstance has been identified.

The evidence is mostly of the negative variety. The potential problems still exist. Continued observations and study will still seek any disadvantages which may develop in the future due, for instance, to a change in underlying conditions.

There is no evidence that discontinuing the use of feed-additive antibiotics would improve human health. It would have a negative economic impact, however, which would be felt primarily by consumers.

In This Issue: Info on Diabetes Care

Guest Editorial

In this issue of INDIANA MEDICINE, beginning on page 250, is a special announcement regarding the publication of a guide for the prevention and treatment of five complications of diabetes. The announcement, reprinted from *Diabetes Care*, summarizes recommendations of the guide, which is directed at primary care practitioners.

During the last decade, there has been a dramatic increase in our understanding of the clinical problems related to diabetes mellitus and its treatment and prevention. In 1980, the National Diabetes Advisory Board met to discuss how the results of this research could be communicated to the practicing community. The guide is a result of that meeting; it was edited at the Diabetes Research and Training Center at Indiana University and contributed to by members of the Airlie House Conference and members of the National Diabetes Advisory Board.

The guide is designed to be of practical help to primary care practitioners in their day-to-day care of patients with diabetes. It contains recommendations for baseline history, physical and laboratory diagnostic tests, and recommendations for treatment and/or referral for five complications of diabetes: abnormal outcome of pregnancy, foot, eye, kidney complications and ketoacidosis. The Diabetes Advisory Board believes that appropriate recognition and treatment of these complications of diabetes can significantly reduce the morbidity and mortality currently associated with them.

For example, it is estimated that twothirds of all amputations in patients with diabetes are potentially preventable by early intervention, appropriate self-care and specialized shoes. Ninety-eight per cent of all pregnancies complicated by diabetes have successful outcomes using modern treatment techniques. Most episodes of diabetic ketoacidosis could be prevented by early intervention by the family and the practitioner. Laser photocoagulation is successful in as many as two-thirds of patients with diabetic neovascularization of the eye. Aggressive treatment of hypertension in diabetes has been shown to lengthen the time between onset of azotemia and renal failure in patients with diabetic kidney disease. In addition, most centers are now reporting excellent results with renal transplantation in patients with diabetic nephropathy.

Of course, the long-term goal of research is to prevent the complications of diabetes entirely. There remains controversy regarding the ability to prevent the microvascular and neuropathic complications of diabetes by aggressive treatment of blood sugars. Although there is scientific evidence suggesting this may be true in experimental animals and in limited human studies, a controlled trial in man has not been performed. Last month, a large clinical trial was initiated by the National Institutes of Health at 21 centers to look at the effects of blood sugar control on the prevention of microvascular complications, particularly eye disease, in patients with insulindependent diabetes mellitus. Until the results of this trial are known, physicians should attempt to individualize therapy

to obtain the best level of metabolic control consistent with normal life using standard means of therapy.—Charles M. Clark, Jr., M.D., professor of medicine, Indiana University School of Medicine, and director, Diabetes Research & Training Center.

DRGs and Tombstone Rights Guest Editorial

New tax amendments will limit by law medical fees charged to all Medicare patients.

At first, this sounds good, but when the next restriction is that physicians will be criminally prosecuted for additional charges, where are the patient's and the doctor's civil rights?

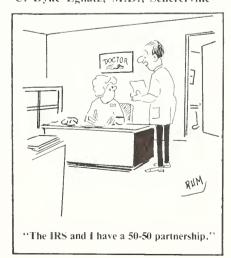
The new DRG (Diagnostic Related Groups) medical services and reimbursement plan is already telling the doctor what extras patients should have and should not have. Now they are saying patients cannot have them even if they are able to and want to pay for them.

If government is deciding if and when people are permitted to go to the hospital, how long they may stay and how much may be spent for that diagnosis, don't you think they should regulate choice of tombstones?

The American Way is status, money, position, power, contracts, recognition, and pretty things.

A tombstone is the last chance to stand above the neighbors. Patients should not average down health care choices. No one will be content with an average doctor as determined by law.—

C. Dyke Egnatz, M.D., Schererville



EDITORIALS

Shaken Baby Syndrome

"Whiplash Shaken Infant Syndrome" and "Shaken Baby Syndrome" are becoming the latest diagnoses to indicate child abuse.

Shaking a child as a method of discipline is a dangerous procedure—the younger the child the more dangerous it is. Infants' heads are heavy in contrast to those of an adult and the neck muscles are not strong enough to withstand shaking.

It has been recently reported in *Annals of Emergency Medicine* that injuries to the brain may occur, sometimes extensive enough to result in blindness or seizures.

The Need for a Hospital Medical Staff Section

Guest Editorial

The coming years are going to bring increasing conflict between hospital administration and hospital medical staffs. Traditionally, hospital staff members have practiced independently and have been economically separate from hospitals.

The new system of reimbursement adopted by the Health Care Financing Administration (HCFA) will effect a complete financial restructuring of the American hospital system by means of prospective payment utilizing diagnosis related groups (DRGs). This program

"Every April 15th I have my income removed."

signals the end of traditional Medicare cost reimbursement for hospitals. Current trends indicate the Medicare DRG approach to hospital payment may be accepted and utilized by all third-party payers. Although the plan in its current form is limited to hospital reimbursement, there is reason to believe that in the future it will grow to encompass physician reimbursement.

Current DRG reimbursement links the survival of hospitals to the behavior of their hospital staffs. Approximately 36% of the average community hospital's revenues are at risk with Medicare DRG payment even prior to their expansion to include all third-party payers. This sets the scene for inevitable conflicts between the organizational and financial interests of hospital administration and the clinical and patient-oriented interests of the physician. Each group is likely to suspect the other of taking over its political and financial turf. In-fighting and bickering will produce seemingly one result—the demise of the community hospital.

Thus, the federal program seems to dictate an integration of the physician's expertise in quality care and the hospital's expertise in management and finances. The future needs of both physicians and hospitals mean the physician must share with hospital administration knowledge of services and procedures to allow for more efficient utilization. Hospital administration must integrate the medical staff into operational budgeting, capital budgeting, and all other institutional activities for improved cost efficacy. Simply stated, most hospitals will be required to improve efficiency and this will be possible only with the help of the medical staff.

While traditionally the medical staff has been an amalgamation of physicians practicing in the hospital, there are factors threatening to change this significantly. Current Indiana state laws guarantee access to the hospital for limited-licensed health practitioners. Federal antitrust laws guarantee that these state laws must be enforced. The Joint Commission on Accreditation of Hospitals (JCAH) feels it must write limited-licensed practitioners into medical staff bylaws or invite lawsuits. Thus again, the stage is set for conflict. Con-

striction of federal spending, a rising number of limited-licensed health practitioners, as well as the expanding physician manpower pool will provide increased competition for decreased hospital resources.

The recent legislative changes are all directed at decreasing the remuneration to hospitals with incentives for efficient utilization of technology and early discharge. However, the practitioner has been and continues to be the ultimate driving force in patient management decisions. Physicians will be pressured by hospitals to improve efficiency without any recognizable reward for the patient. The patient will not want to be discharged early and if a complication arises from early discharge the physician will most likely be held culpable. The physician is comfortable bearing responsibility for his own actions; however, it now appears he will be increasingly held accountable for the actions of the hospital in its role of health care provider.

This conflict in which the physician is only indirectly involved will predictably produce frustration and a desire to avoid involvement; however, the need for the physician to actively participate with his medical staff in dealing with these conflicts is paramount. The need for the medical staff as a whole to understand the true problems of the hospital and these conflicts is obvious. If medical staffs are to be prepared for these eventualities, a statewide organization of medical staffs is necessary.

The annual 1982 AMA meeting of the House of Delegates recommended the formation of a Medical Staff Section in the AMA because of changes in the medical care environment, trends in hospital management, and new medical staff issues and problems. The interim 1982 meeting of the American Medical Association created a Hospital Medical Staff Section (HMSS) to address the relationship between the AMA and hospital staffs. The annual and interim 1983 AMA meetings have provided an open assembly in which each of the 7,000 hospitals in the United States have been send one elected eligible to representative.

It has been my privilege to attend both of these national meetings as a represen-

tative to the HMSS. It has been illuminating to learn about the problems of medical staffs and about their successful as well as abortive attempts at solutions to the many conflicts facing physicians in these changing times. It seems unquestionable that the financial restructuring of Medicare hospital reimbursement will further heighten conflicts existent between hospital administration and medical staffs.

This environment of conflict demands an organization which can effectively and judiciously identify with the problems of the individual physician attempting to deliver quality care in Indiana hospitals. Medical staffs must combine strengths in an effort to provide an effective response to DRGs and their resultant role of increased hospital determination in the practice of medicine in Indiana and the nation.

Therefore: I hereby resolve that the Indiana State Medical Association follow the leadership of its national organization and establish an Indiana Hospital Medical Staff Section. Be it further resolved, that the Indiana State Medical Association encourage all hospitals in the state to send an elected representative to both state and national meetings of said section.—Robert W. Holden, M.D., Professor of Radiology, Indiana University School of Medicine, and Chief of Radiology, Wishard Memorial Hospital, Indianapolis

Medical History Puzzle

An article in JAMA observes that the increase in worldwide travel has added

a new question to the process of medical history taking.

"Where have you been?" may produce the lead to diagnosis of a puzzling set of symptoms which develop several weeks after return from foreign parts. The advice also applies to travel in the U.S. where there are spots where hygiene and sanitation are a little informal.

In addition, there are still occasional cases of plague and regions in which tick bites may introduce hazards to health right here at home.

Response to Harris Survey Editorial

Letter to the Editor

The editorial in your January issue on the Harris survey on costs and the health care system was intriguing. Cost containment has certainly proved easier to discuss in theory than to implement in practice. Health maintenance and preventive care are popular, but information on just how to proceed in a targeted way that addresses the major risk factors is usually a bit scanty. Last year the State Board of Health began to help communities study their own risk factors and start deciding what actions are feasible. Contact their Health Education Division for information.

Your editorial reported on a recommendation that there be more efforts at education and prevention about life styles, and suggested that the subject should be discussed "more often and very persistently." Why? Shouldn't we

first check and see how many course hours on wellness, preventive medicine, and public health are in our state medical school curriculum?

Do we seriously think that better life styles would reduce the national medical care bill by 50%? Better life styles probably would help in slowing the rapid rate of growth of medical costs. Given the system that is in place, reducing expenditures by 50% sounds like a presidential candidate's promise.

Some states have taken the initiative in establishing statewide health education networks that are active primarily in the schools where healthy and unhealthy habits are first established. This is an inexpensive alternative investment to counteract the billions spent to induce smoking, alcohol intake, and unwise food habits. Without such alternative investments can we really expect health status to change or medical expenses to be reduced?

Perhaps physicians ought to insist that the great race to spend money on education must include solid health education courses at all grade levels. It needn't cost an arm and a leg to learn about wholeness and health.—Stan Reedy, M.D., M.P.H., Health Officer, Elkhart County Health Department

Editor's Note: The 50% lowering of the U.S. medical care bill was reported by Dr. Daniel T. Cloud when he was president of the AMA. His figures were reportedly taken from official reports of departments and agencies of the federal government.

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An added complication... in the treatment of bacterial bronchitis*



Brief Summary. Consult the package liferature for prescribing Information

Antibonics including Ceclor should be administered autiously to Antibonics including Ceclor should be administered autiously to Antibonics who has demonstrated some form of allergy particularly to drugs. Pseudomembranous colitis has been reported with virtually all broad-spectrum antibonics (including macrolides, semisynthetic pencillins, and cephalosporians) therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibotics. Such colitis may range in severity from mild of life-threatening the properties of the properties of the color and may permit overgrowth of colorida. Studies indicate that a flowin produced by Costrictum difficile is one primary cause of antibotic associated colitis. Mild cases of pseudomembranous colitis usually respond to drug discontinuacie alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, o'al valoricipies and the produced by Costricture of the colorist colorists of the colorist of the colorists of the co

parfurition, it should be recognized that a positive Coombs. Test may be due to the drug of Ceclor should be administered with caution in the presence of Ceclor should be administered with caution in the presence of Ceclor should be made to the conditions, careful clinical observation and laboratory studies should be made because alsel dosage may be lower than that usually recommended. As a result of administration of Ceclor a false-positive reach of Lordon and Ceclor a false-positive reach of the Ceclor of Ceclor and Ceclor a false-positive reach of the Ceclor of Ceclor and Ceclor and Ceclor a false-positive reach of the Ceclor of Ceclor and Ceclor a false-positive reach of the Ceclor of Ceclor and Ceclor a false-positive reach of the Ceclor of Ceclor of

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Some ampicillin-resistant strains of Haemophilus influenzae—a recognized complication of bacterial bronchitis*-are sensitive to treatment with Ceclor.1-5

In clinical trials, patients with bacterial bronchitis due to susceptible strains of Streptococcus pneumoniae, H. influenzae, S. pyogenes (group A beta-hemolytic streptococci), or multiple organisms achieved a satisfactory clinical response with Ceclor.7



Pulvules®, 250 and 500 mg

hour. The effection nursing infants is not known. Caution should be exercised when Cector." (cefactor. Lilly) is administered to a nursing

or after antibiolic treatment. Nausea and vomiting have been reported tarety.
Hypersensitivity reactions have been reported in about 1.5 percent of patients and nucleum embilitiom eruptions (1.1 mol). Pruritivity urticaria, and positive Coombs. Tests each occur in less than 1 in 200 patients. Cases of serum-sickness like reactions (ery thema multiforme or the above skin manifestations accompanied by arthritis arthritiaga and, trequently fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred uring or following a second course of the apply with Cests of the course during or following a second course of the apply with Cests of the course during or following a second course of the apply with Cests of the course during the course of the cour

patients)

Causal Relationship Uncertain—Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed believe to serve as alerting information for the physician.

Hepatic—Signit elevations of SQDT SQPT or alkaline phosphatase values if in 40.

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values (1 in 40)

Hemalopoietic—Transient fluctuations in leukocyte count predominantly lymphocytosis occurring in infants and young children (1 in 40)

i 1 in 40) Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urrinalysis (less than 1 in 200)

Many authorities attribute acute infectious exacerbation of chronic bronchitis to either S. pneumoniae or H. influenzae.
Note: "Cector's contraindicated in patients with known alter gy to the cephalosporins and should be given cautiously to penicillin-altergic."

patients — Papatients — Pencillin is the usual drug of choice in the freatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Another Look at Health Care Costs

GEORGE T. LUKEMEYER, M.D.¹ DONALD F. FOY, M.S., M.P.H.² Indianapolis

NE CANNOT DENY that nominal health costs have been rising faster than the general inflation rate for at least the past half century. That fact is increasingly decried by one prophet or another as a national crisis in which our "finite resources" are allegedly being consumed so rapidly that only extensive restructuring of our health care system can prevent calamity. Yet none of the rest of the world's health systems have prevented cost escalation and several have achieved modest control only at a regretable sacrifice of quality or availability.

It is paradoxical that the escalating production of dazzlingly new or strikingly improved medical services, which are often life-saving, is widely viewed by people who should know better as a serious threat while they simultaneously lament the lack of similar improvements in the quality and creativity of say our auto, steel, rail, energy, construction and education industries.

Because the health care industry is progressively adding to the nation's wealth more than is any other business, the percentage of our GNP contributed by health services is steadily increasing just as the percentage comprised by stagnating industries is falling.

to health cost escalation than inflation. In fact about half (49.2% hospitals, 56% physicians) of the increase in "health costs" is due to inflation alone, yet inflation is generated not in hospitals or doctors' offices but in Washington.

Inflation refers to an abnormal in-

No other factor has contributed more

Inflation refers to an abnormal increase in prices which results not from actions by the producers of goods and services or from the natural laws of supply and demand but rather from actions by the producers of money—the federal government.

In 1960 a man whose hip was destroyed by osteoarthritis would likely have been treated with \$10 worth of aspirin, a \$10 cane and \$20 worth of advice to walk less. Today for about \$9,000 we can replace his destroyed hip with a new artificial one and allow virtually painless, minimally restricted activity but at a tremendous increase in dollar cost. We should remember, however, that we can still give the same aspirin, cane and advice at 1960 prices plus the inflation rate. The unit cost for treatment of severe osteoarthritis of the hip and for

How can a service cost more if it never existed before?

It is thus apparent that those increased costs which are due to inflation are not health costs at all but the costs of clumsy governmental money management which no manipulation of the health care industry can correct.

It is perhaps worth noting that the inflation-adjusted prices of many health services are in fact gradually falling, especially so if one adjusts for changes in quality. A construction worker had to work 30 hours to pay the doctor bills for an appendectomy in 1950 (\$75), but he only had to work 24 hours to do so in 1979 (\$300). (Yet the 1979 appendectomy was much safer, more comfortable and convenient.) Many people are also surprised to learn that, according to the Bureau of Labor Statistics, the annualized increase in physicians' services has been lower than the all services component of the Consumer Price Index (CPI) in four of the past five years. In fact, between 1970-1977 physicianpractice expenses rose 87% while net incomes rose 46%.

many of the other diseases we treat has thus increased because the quality has increased to an equal or greater degree.

The fundamental question about quality escalation therefore is, how can a service (like total hip replacement) have increased in price if it never existed before? In other words, the very nature of the quality of health care changes much more from month to month than that of cars, hamburgers, houses and the other components of the CPI, giving the illusion of unexplained rising prices.

Quality escalation also generates other new costs indirectly. Note for example the statistical effect on costs of changes in the treatment of ventricular fibrillation: In 1960 a patient with ventricular fibrillation was appropriately "treated" by simply pronouncing him dead. Today with aggressive therapy we may resuscitate him (about 25% of the time) but at an enormous percentage increase in cost compared to the older "treatment" which cost nothing. One should remember, however, that he will generate

Presented to the Hospital Prospective Payment Study Commission, Indianapolis, Feb. 7, 1984.

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additional "new" health costs after his defibrillation which he would not have incurred if he had remained dead. All of those subsequent new costs will contribute to the statistical appearance of "soaring" national or per capita health costs since they will be considerably greater than those he would have generated before the invention of defibrillation. All health costs stop at death and everything we do to prolong life appears as a statistical increase in health costs while paradoxically making the population appear to be statistically sicker.

One should therefore look skeptically at the popular assertion that increased preventive services will reduce health costs. No preventive measure makes a person immortal. A man with emphysema who is prevented from dying of pneumococcal pneumonia by immunization does not also become immune to the inevitable often chronic and expensive infirmities characteristic of aging. Preventive measures are important and valuable for immediate humane reasons but they may not reduce overall health costs and some measures will substantially increase them.

We can, of course, reduce the costs of quality escalation by stifling or delaying the creation and availability of new or improved health services. Unfortunately, most cost control schemes do just that to some degree. One suspects, however, such effects may ultimately prove to be false economy.

Health expenditures should expand at the same rate that the population expands and, in fact, about 7% of the increase in health costs from 1967 to 1981 was on that basis alone. We could, of course, reduce that cause of health cost increases by mandatory birth control, limiting legal and illegal immigration and encouraging passive (or active) euthanasia. The crisis mentality surrounding health costs has already made such previously unthinkable alternatives discussable options.

Ninety-five per cent of the increase in hospital days in the past 10 years has been from the over-65 age group

(Topeka Cap-Journal, May 12, 1981). Nearly 30% of the nation's health care bill is accounted for by 11% of the population who are over 65 and that proportion will continue to grow regardless of any changes in the health industry. In 1977, 23% of health care costs for the elderly were nursing home costs and the nursing home population is expected to increase by 70% by the year 2000. Not only are the elderly voracious consumers of health care but a large amount of food, shelter and general domicillary care is increasingly designated "health care" because families prefer government subsidized nursing home care to home care. Many women cannot stay home caring for aged parents while providing a fulltime second income for their families. Thus, nursing home care often is as much social welfare as "health care."

they offer: Podiatrists, psychologists, optometrists, nurse practitioners, physicians' assistants, nurse cfinicians, technicians (pump, lab, x-ray, orthotics, computer, dialysis, etc.), semi-volunteers (hospice centers, health fairs, single disease special interest groups), all are rapidly expanding their repertoire of services and increasingly selling them directly to sick and healthy patients alike. The boom in non-physician health services is paralleled by a boom in non-scientific "health costs" (chiropractic, megavitamins, over-the-counter self-treatment, chelation therapy, etc.).

It is time to recognize that the definition of health care is steadily shifting from, "The treatment of acute disease by physicians, nurses and hospitals," to "The enhancement of emotional and physical health by any means." If the

Some day 100% of our GNP may be devoted to 'health care'

The theory that a proliferation of physicians would reduce costs by stimulating price-lowering competition is now recognized, too late, as fallacious. The 70,000 excess physicians predicted by 1990 will perform health services at an increased combined rate and will attract patients not so much by lowering prices as by increasing the quantity, quality and availability of their services. If health costs were really at a crisis stage, physician supply (largely determined by state governments and therefore entirely controllable) would seem to be a reasonable place to start cutting. If, on the other hand, this substantial increase in physicians is really needed, can health costs really be at a crisis stage now?

It is also well to remember that the explosion in health providers is greatest in the non-physician categories. Many non-physicians are performing services previously done only by physicians or are rapidly increasing the scope and cumulative cost of the special services

trend continues, we may eventually see the day when 100% of our GNP will be devoted to "healthcare." If so, will that really constitute a crisis?

The cost of professional liability protection for physicians, their skilled employees and hospitals totaled an estimated \$3.5 billion in 1983 and between 1960-1972 increased more than 600%. The projected cost of \$15.1 billion for defensive medicine represents about 5% of the nation's 1982 medical care expenditures. It is not surprising, therefore, that malpractice premiums for all physicians added \$5 a day to the cost of a hospital stay in 1982 and \$4 a day to the cost of every visit to a physician's office.

Of particular concern to organized medicine is the possible negative impact of the new DRG reimbursement system upon professional liability claims. There is a sense of foreboding because of the anticipated pressure by hospitals to curtail the ordering of diagnostic procedures and shorten hospital lengths of stay.

Both could result in increased malpractice claims for failure to order medically necessary diagnostic procedures and premature discharge. Thus, DRGs may influence the trend in malpractice claims due to the inevitable clash in the use of technology with cost containment efforts.

It is most interesting to note that a presidential commission (Grace Commission) which only six months ago wanted to expand Medicare's new DRGs to all patients has apparently had a change of heart. In a report approved just hours before the commission delivered its final recommendations to President Reagan, it now views DRGs as a "short-term crisis management tool." The final report does not overtly repudiate its earlier call for expanding DRGs, but it does express concern with bureaucrats making life and death decisions under DRGs. It also recommends against extending DRGs to physician services.

While paying lip service to the use of DRGs as a "short-term crisis manage-

ment tool," the report labels the new fixed price payment system (DRGs) a "complex system of federal regulation that probably will not work and is likely to stifle scientific advances." Without dismissing DRGs completely, the report calls them a "good interim measure because they will condition people to think prospectively."

Referring to newly compiled data, the report concludes that seven health care advances added about \$20.4 billion to 1982 hospital costs and accounted for

16% of the increase in hospital costs in the 1960s and 1970s. The report further speculates that some of the technologies (end-stage renal disease treatment; diagnostic imaging; neonatal intensive care; heart bypass, valve, and pacemaker surgery; arthroplasty and joint replacements; and parenteral nutrition) would not have been developed under government price regulation. The authors of the report further charge that government efforts to regulate technology are particularly ill-advised.

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Understanding the Impact of DRGs

Dr. Allen presented the following testimony to the Indiana Legislature's Hospital Prospective Payment Study Commission, Feb. 7, 1984. He is a practicing urologist in Anderson, where he serves on the staff of two hospitals, with which he has served in various leadership capacities, including president of the staff and chairman of the Dept. of Surgery. He told the commission that he has been in "close communication with a number of hospitals throughout the state as we have sought to understand the impact of the reimbursement methodology of a prospective payment system on diagnostic related groups (DRGs). "

FULL WELL EXPECT the majority of our hospitals will continue to work in a good faith relationship with their staff physicians as they strive to preserve the traditional high quality care of their mutual patients. Even so, I feel it is essential that we survey the potential implications of the newly implemented system of DRGs.

Implications for Hospitals

The exact consequences of the Prospective Payment System (PPS) are as yet unknown, but a number of potential implications for hospitals are well recognized and are beginning to emerge in many Indiana hospitals now operating under DRG regulations.

Under the Prospective Payment System all hospitals are at economic risk since any hospital rendering care at a cost above the DRG rate will lose money. The economic incentive for the hospital, then, is to find ways to provide services below the DRG reimbursement rate. Because hospitals will receive a predetermined fee for each diagnosis, there will be a strong economic incentive to *minimize* the patient's length of stay and the consumption of hospital services. This may lead some hospitals to select and provide



LAWRENCE E ALLEN, M D

President-Elect
Indiana State Medical Association

those services which it can render most cost efficiently and exclude such services which do not show a profit. This may result in the elimination of intensive care facilities in some hospitals and thus for some communities, while other hospitals are obliged to continue providing such services at an increasing economic burden.

One of the more predictable reactions that hospitals have taken to the new Medicare payment system is in the area of reduction of nursing and other ancillary personnel. Examples of this are apparent in the layoffs of more than a hundred workers at three northwest Indiana hospitals, namely St. Mary's Medical Center in Gary and Hobart and St. Margaret's Hospital in Hammond. Other hospitals have merely elected not to fill vacancies as they occur through resignations in the hospital's employee and administrative staff.

The potential for specialization of hospitals is recognized as hospitals seek

to identify those services that are more financially profitable and cost effective. This will result in the referral of certain disease entities out of local communities and into urban centers, or the shunting away of certain cases from proprietary hospitals to those public hospitals obligated to receive all comers. The potential for pre-admission selectivity of cases by hospitals wishing to entertain care for certain short stay disease entities is readily apparent.

The long-term effect on various community hospitals struggling to stay within budgetary restraints of the current Prospective Payment System may be reflected in the decisions toward the acquisition of new technology and skilled personnel, thus affecting the quality of care to be provided by that institution in future years. Certainly it is the intent of the current law to phase out "pass throughs" for capital expenditures. This will be the subject of the annual report by HCFA to Congress during the current year.

On the brighter economic side, hospitals in Indiana have a favorable rate of reimbursement as compared to the sister states making up Area 5 of the DRG payment system. (Based on 1982 figures, Indiana's cost per admission was \$2,242 as compared to the regional figure of \$2,679.) It should be recognized, however, that this reimbursement advantage will be partially phased out after three years when the national DRG rate becomes the standard for hospital reimbursement.

Hospitals and health planners looking to the experience of such pilot programs as have been ongoing in New Jersey may be disappointed as to any expected fiscal gain for hospitals under the DRG program. It is of interest that with the start of the pilot study in New Jersey, fairly attractive reimbursement rates were available to participating hospitals.

Nonetheless, after the first year of using the Prospective Payment System, 15 of 94 acute care hospitals reported losing money. At the end of 1982, 45 of the 94 participating hospitals reported financial losses, according to the senior vice president and director of financial management at the New Jersey Hospital Association, Dom J. Camisi. One other report of interest from the New Jersey experience is that contained in the data analysis provided by Jeffrey Wasserman, vice president for research for the Health Research and Educational Trust of New Jersey. Therein Mr. Wasserman quite candidly reports "not only is there no proof that the DRG system has saved money but it is possible that the system has caused more money to be spent."

Because of the way the present classification identifies urban and rural hospitals, some of Indiana's larger hospitals will be reimbursed on the basis of a rural rate reimbursement system. Consequently, certain specific hospitals in Columbus, Richmond, Marion, Vincennes and LaPorte are looking at millions of dollars in lost reimbursement revenues over the next four to five years. Specific examples of this are Bartholomew Hospital which projects an \$8 million loss in the next five years and Marion General Hospital which expects to lose some \$7.5 million in the next four years. As would be expected, these hospitals are looking to legislative amendments to provide relief from the present regulations that would deprive them of reasonable reimbursement for their operational costs.

One very real apprehension is that the current Prospective Payment System for Medicare patients will further accentuate the practice of cost shifting by hospitals to other public and private payors.

Certain responses to the DRG system are almost automatic. Hospitals are currently involved in holding educational programs for physicians as well as developing more sophisticated informational data processing capabilities. Data monitoring will allow for more precise profile assessment of physician practice patterns. Hospitals will also enhance the

role of discharge planning because of the increased financial incentives to discharge patients as quickly as possible and to upgrade the authority of hospital product managers as they strive to eliminate product lines that lose money and make arbitrary decisions as to selection of pharmaceuticals, equipment lines and disposables that are more financially attractive to the hospital's budgetary interest. Quite naturally, hospital administrators will be seeking to gain physician cooperation in patient management, establishing admission and utilization criteria, developing case mix coordination teams, and empowering medical records staffs to change principal diagnoses. It can be expected that administrators will strive to influence doctors to modify their practice patterns to approach the hospitals' standard cost and in some instances may work to modify ongoing treatment plans employed by the medical staff. This quite naturally can bring about conflict between hospitals and physicians. Nonetheless, case mix prospective reimbursement can be a strong motivator of team effort by physicians, nurses, medical records staff and financial personnel.

Implications for Physicians

In the spirit of cooperation, one of the prime responsibilities that physicians will be addressing is that of hospital record completion. Therefore, hospitals will place a high premium on having complete and accurate descriptions of each case promptly included in the medical hospital record by the attending physician. However, since it is to the hospital's advantage to have each admission classified in the DRG with the highest reimbursement rate, physicians will undoubtedly have to deal with suggested modifications in discharge diagnoses assigned to each case. Such practice is referred to as DRG "creep" which represents an inflating of the diagnosis to obtain a higher payment rate. It is possible that some physicians will feel discrimination depending upon their willingness to cooperate with such

pressures.

Hospitals have already begun gearing up for a sophisticated computer system into which DRG information can be entered. It will be easy to prepare reports that will sort out each physician as to his practice profile related to average length of stay, and the kind of ancillary services used. Physicians will learn more about their own practice style through comparison with others. Some physicians who are high utilizers may be faced with losing their staff privileges unless they modify their style of practice. Some of these physicians, however, may be involved in the care of the more complicated medical problems while, on the other hand, other of our physicians may find that their practice patterns are more favorable to hospital adminstrators simply because they admit patients with a lesser severity of illness and thus a shorter length of stay. Certainly the activity of peer review organizations (PRO) will play a sensitive role in evaluating quality care and supervising some of the policy issues enacted by the administrators and governing bodies of our various hospitals.

Since out-patient services are not subject to DRG payments, there are strong incentives to perform more procedures in physician offices, out-patient clinics and surgi-centers where the cost for many procedures is one-tenth that incurred in the hospital setting.

Other alternative forms of health care delivery are represented by the prepavment concept of Health Maintenance Organizations (HMO) and Individual Practice Associations (IPA) as well as the more recent development of Preferred Provider Organizations (PPO). These alternative forms of health care delivery represent a response to competitive pressures and rapidly escalating health care expenditures. Such systems of health care delivery fall outside the traditional bounds of private office-based physicians and fee-for-service reimbursement as well as in-patient hospitalization reimbursement on the basis of costs incurred. Although the formation of Health Maintenance Organizations as well as Preferred Provider Organizations has not been widespread in Indiana, we do have an example of each in the form of the now existent Metroplan operating in the Indianapolis area as well as the recently formed PPO being utilized by Methodist Hospital of Indianapolis for its employees. Such organizations will be free to negotiate directly with the hospital for in-patient hospital services under the DRG system.

One area of deep concern as physicians survey the influence of the new Prospective Payment System on the hospital, physician and the patient has to do with the escalation of the *professional liability risk* for doctors as they attempt to preserve a standard of care for their patients within the restraints of length of stay and utilization of services. Such pressures can be particularly strong on hospital salaried physicians.

The most significant implication of PPS for physicians, then, has to do with the conflict growing out of a confrontation of divergent concerns with the hospital on the one hand striving to maintain fiscal solveney and the physician attempting to maintain a standard of patient care. Decisions affecting practice patterns such as the number of procedures utilized and the length of stay may become a collective decision of physicians and hospital administrators. Hospital policy for transfer of patients to nursing homes and rehabilitation centers may be strongly superimposed upon the physician's judgment for the financial expediency of the hospital.

In view of this ongoing dilemma, physicians recognize the increasing importance of assuming a leadership role with hospital administrators as to how to effectively operate within the system. Medical staff committees must become active in the implementation of the Prospective Payment System and work with the administration in maintaining the financial viability of their hospitals. Lastly, we as physicians must realize that we are primarily the patients' advocates. The medical staff must maintain the authority to exercise decision-making responsibility in areas which relate to the

quality of care of their patients.

Future of Prospective Payment Systems

In contrast to physician concerns that the newly initiated Prospective Payment System may weaken the quality of patient care, some health care providers anticipate a significant improvement in their business. These health care providers are Health Maintenance Organizations, nursing homes, home care agencies and well managed proprietary hospital chains. Examples of the latter are such "for profit" hospital companies as Humana, Hospital Corporations of America and National Medical Enterprises. These conglomerates are anticipating further expansion as they take over the management of many hospitals that have run into financial difficulties such as a troubled public hospital in Crawfordsville that was taken over last year by the California-based American Medical International which has become the fourth largest hospital company in the investor-owned category.

While government officials contend that the DRG program eventually could save millions of dollars in payments to hospitals annually, none of the states that have participated in the early pilot study of the Prospective Payment System have shown any real savings in government spending. It is expected that our experience with DRGs will be similar to that with PSROs, i.e., for every dollar saved an equal amount was spent in government regulation. Any effective achievement of the stated goals of HCFA's Prospective Payment System can only be achieved at the greater cost of de facto health care rationing to senior citizens and the deterioration of quality care and the patient-doctor relationship.

If the Prospective Payment System becomes the methodology of reimbursement for all payors, we have the potential for creating a two-tier medical delivery system similar to that existing in Canada and England. Medical care in such a system would be disbursed on one level to patients covered by the Prospective Payment System while those having the affordability could opt to purchase health care outside the Prospective Pay-

ment System. Certainly one of the grave concerns that physicians have toward the prospective payment methodology is that it serves to limit accessability to health care to a segment of our population who will need it the most, i.e., the elderly.

Reports now emerging from studies of the DRG system such as exemplified by the Grace Commission describe DRGs as a short-term "crisis management" tool that should be replaced with a cap on federal health care spending and the use of Medicare vouchers. The report repudiates an earlier concept of expanding DRGs to all payors and is specifically critical of the image of bureaucrats making "life and death" decisions under such a DRG mechanism. It was suggested in this report that DRGs are a good interim measure because they will condition people to think prospectively. However, it was felt that per capita spending for each beneficiary group would never be reduced. It is predicted that health care providers or groups of providers will eventually bid to provide services to beneficiaries who after a time will be given federal vouchers. The report further labeled the new fixed price payments established under the DRG system as a complex system of federal regulation that probably will not work and moreover is likely to stifle scientific advances. The report further stated that, using newly compiled data, it was determined that seven specific health care advances had added about \$20.4 billion to 1982 hospital costs and accounted for about 16% of the increase of hospital costs in the 1960s and 1970s. These technologies included end stage renal disease treatment, diagnostic imaging, neonatal intensive care, heart by-pass, valve and pacemaker surgery, orthoplasty and joint replacements and parenteral nutrition.

When one considers the multiple alternatives now available in health care delivery, it seems truly unlikely that one rigid methodology of reimbursement will survive without crippling the progress of this nation in providing accessability and excellence in our system of health care delivery.

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AUXOLOARY REPORT

Hulda Classen (Mrs. Peter) President, ISMA Auxiliary

The time to hand over the gavel is approaching. As I reflect over the events of the 1983-84 auxiliary year, it is difficult to select just a few for my final column.

To acquaint you with more of the personal involvement of the board members, county auxiliaries, membersat-large and legislative activities through the Key Contact program, I asked different ones to be guest authors. This varied pattern revealed some of the many facets of our auxiliaries across the state.

Our auxilians are involved in many

health-related areas such as child abuse prevention, hospice, and chemical dependency programs.

We continued our AMA-ERF fund taising. Each year it is a challenge to exceed the previous year's goal. We look forward to the report at the April House of Delegates.

Our Health Project in collaboration with the American Cancer Society is gaining momentum. We propose to continue on with the "An Early Start to Good Health" program.

We can always use more "know-how" in the legislative process. We appreciate the opportunity to share in the Key Contact Seminar in December and the invitation to an AMPAC seminar in April.

Membership recruitment is a continuing challenge. The encouragement and assistance you give is highly valued.

We thank you for your financial assistance. But most of all we thank you for Rosanna Her and the rest of the ISMA staff who advise and assist us in our endeavor.

INDIANA STATE MEDICAL ASSOCIATION AUXILIARY Executive Committee

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BOOK REVIEWS.

Vascular Grafting: Clinical Applications & Techniques

Edited by Creighton B. Wright with Robert W. Hobson II, Loren F. Hiratzka and Thomas G. Lynch. Copyright 1983, John Wright, PSG Inc. 397 pages.

This book will probably take its place as a major contribution to the international literature dealing with vascular disease.

Creighton Wright has gathered together several of the foremost authorities in vascular disease to address the questions posed by W. Sterling Edwards in the preface: In attempting to define the best small vessel graft, does the graft have to be porous? Electrically conductive? Is an inner surface with a negative charge necessary? Do we need to form an autogenous surface by implantation or by endothelial seeding? Is graft compliance necessary? Can an elastic graft be kept from becoming aneurysmał? Can small grafts be kept open with antiplatelet drugs or anticoagulants?

As co-chairman of the Association for the Advancement of Medical Instrumentation, Dr. Wright and his committee are responsible for the standards for vascular graft prostheses and have outlined the following notion of an ideal vascular prosthesis:

- 1) The prosthesis should be readily available in multiple sizes and configurations;
- 2) The prosthesis should be biocompatible, allowing healing with a non-thrombogenic surface;
- 3) The prosthesis should be associated with a low infection rate;
- 4) The prosthesis should be durable, strong, and last the life expectancy of the patient;
- 5) The prosthesis should be easy to handle and be easily suturable;
- 6) The prosthesis should have proven patency as close to 100% as possible.

From the first chapter, "History of Vascular Grafting" by Dr. Charles Hufnagel, to the final chapter, consideration of the role of compliance in the success of vascular grafting, one is privileged to an overview of the complexity of this segment of a young science. The aspira-

tions and frustrations of careful investigators are apparent, as well as the pride of accomplishment of the diverse approaches to the problems of the aging of our vascular systems.

The l'abrication and testing of textile vascular prostheses is presented by Dr. Roger Snyder, who is the technical director of Bard and co-chairman of the standards committee with Dr. Wright. Dr. Edwards reviews Teflon grafts, Cannon the Gore-Tex, and Sauvage the Dacron with great care, while Dean reviews the complexities of renovascular grafting and Bosher, Lynch, and Hobson review femoral-popliteal reconstruction.

The modified Bovine graft is considered by Rosenberg, while Dardik reviews his experience with the umbilical vein. The reintroduction of in situ vein grafting by Leather and the introduction of externally supported prostheses grafts by Sauvage are important contributions—all by giants in their field. The consideration of aneurysmal dilation of venous grafts by Norman Rich and a review of thrombosis by George Collins are important parts of this book.

For sheer clarity of reason in the exposition of the excitement of observation, the chapter on Endothelial Seeding of Blood Flow Surfaces by Malcolm Herring takes the cake. In patiently threading through the labyrinth of problems involving chemistry, physics, biology, and pathology, Dr. Herring has exhibited the highest ideals of medicine. One cannot finish reading this proud chapter without joining with Malcolm in praying for success and that the Merrill-Lynch bull will emerge from the maze covered with endothelium.

The success of an experiement by Drs. Richardson, Wright, and Hiratzka would seem to be the most pertinent citation in the book. Dacron and elastic grafts were prefined with endothelium by implantation into the aorta of dogs for 12 weeks and then used to replace the iliac vein. They overwhelmingly outperformed the unlined synthetic grafts.

Dr. Wright is to be congratulated on editing a fine book.

Austin L. Gardner, M.D. Indianapolis Cardiovascular Surgery

Current Emergency Diagnosis & Treatment

Edited by John Mills, M.D., Mary Ho, M.D., and D.D. Trunkey, M.D. Copyright 1983, Lange Medical Publications, Los Altos, Calif. 738 pages, softcover, \$24.

Like all of the Lange yearly paperback medical publications this is an eminently useful guide for practicing physicians, another true bargain. The accounts of the various emergencies and their management are easily found. The discussions are succinct but comprehensive enough to give good guidelines for quick diagnosis and logical steps in treatment. On the inside cover is a list of the 15 drugs used most commonly in emergencies, with dosage and directions for each. Inside the back cover the commonly used I.V. solutions with their electrolyte compositions are listed, along with a table for converting drug doses in mg/kg to total doses according to patients' weight. Quite properly the text begins with well-illustrated sections on CPR and the management of shock.

A later section picked at random is devoted to abdominal trauma. It begins with recommendations for assessment for immediate life-threatening problems and treatment of shock; then an algorithm for the logical succeeding steps. Often there is a clear indication for laparotomy, which obviously must not be postponed, particularly when the evidence points toward a penetrated or ruptured viscus. Abdominal trauma very often is accompanied by serious injuries to other parts of the body such as chest, spine, kidney, extremities and head. Determination of abdominal rigidity and tenderness may be hampered when the patient is obtunded or intoxicated. Hemorrhage is an ever present threat. Sometimes laparotomy is essential for its control. Very often blood transfusion is indicated.

Another topic picked at random is hypertensive crisis. The latter is often accompanied by headache, visual disturbances, papillary edema, retinal hemorrhages, encephalopathy, congestive heart failure, pulmonary edema, aortic dissection or hemorrhagic strokes. Blood pressures in the range of $\frac{220.250}{120.150}$ are not

uncommon. The optimum drugs to be used immediately are diazoxide (Hyperstat), 1.V. nitroprusside or Hydralazine along with vigorous diuresis. Close monitoring in the hospital setting should be arranged if possible.

The chapter on head trauma, which covers ten pages, begins with a logical discussion of the steps to be takenimmobilization of the cervical spine, establishment of an airway if necessary, CPR if required, management of shock. Emergency drugs that may be indicated are Dexamethasone and 1.V. osmotic diuretics for cerebral edema; diazepam (Valium) and/or phenytoin to control seizures, tetanus prophylaxis and prophylactic antibiotics if the wound is grossly contaminated and analgesics if required. The essentials of the physical, including neurologic, examination are then outlined, together with the radiation techniques deemed necessary. After this the initial management for closed, open and depressed fractures; cerebrospinal leak, diffuse lesions with brain injury are outlined. Other sections are equally informative.

This reliable and useful text for dealing with emergencies should be a valuable resource for every practicing physician.

Paul S. Rhoads, M.D. Richmond Internal Medicine

Wilderness Medicine

By William Forgey, M.D. Copyright 1979, Indiana Camp Supply Books, Pittsboro, Ind. Paperback, \$7.95.

Wilderness Medicine by William Forgey, M.D., combines the qualities of an experienced wilderness traveler and a competent physician. The theme of the book is self-explanatory and is well divided under prevention, diagnosis, treatment, and emergency medical techniques. As a handbook for wilderness trips, its instant reference clinical index is of outstanding value. This lists symptoms, problem by common and scientific name, and treatments, including both trade and generic names of medications where applicable.

Two helpful medical kits are described. The first is designed for ex-

tended trips where medical help is not available and includes prescription items. The second is a non-prescription medical kit for lengthy trips where medical help is not available.

The basic plan of the book is to describe medical problems and their treatment—immediate or definitive, item by item.

Thus, such topics as fever and chills, shock, eye problems, snow blindness, middle ear infection, burns, cardiopulmonary resuscitation, hypothermia, heatstroke, and even constipation and hemorrhoids are all covered, to mention only a few of the unpleasant medical problems that are so prone to arise on a trip into the wilderness.

This attractive little handbook appears to be unique, at least in the experience of this reviewer. Suitable illustrations are included, as is a bibliography on wilderness medicine and a centigradefahrenheit conversion scale.

The handbook can be recommended for any serious backpacker or anyone contemplating a canoe trip.

The author is chairman of the Emergency Medicine Department, Ross Clinic, Merrillville, Indiana, and an academic affiliate of Butler University. This paperback volume can be ordered from Stackpole Books, Box 1831, Cameron & Kelker Sts., Harrisburg, Pa. 17105.

W.D. Snively, Jr., M.D. Evansville Internal Medicine

Clinical Ultrasound Reviews, Vol. 3

Edited by Fred Winsberg, M.D. Copyright 1983, John Wiley & Sons, Inc., New York. 378 pages, 65 tables, 375 illustrations, \$75.

While not purporting to be an encyclopedic atlas or definitive work, this book is a logically organized collection of abstracts of significant ultrasound literature of the year. The succinct abstract format with a liberal dose of appropriate editor's notes gives in-depth perspective not obtainable by reading articles one at a time, as they appear chronologically in the literature.

The editor's comments are candid and often poignant: "This article is worth

careful reading." "It would be interesting to make the same comparisons in a more realistic setting." "This study would have been more interesting had the livers been studied antemortem." "Obviously, however, confirmation by other workers is required."

The initial section on physical measurement and techniques covers recent work including digital analysis of backscatter wave forms (a disappointing effort thus far) and acoustic properties of normal vs. cancerous hepatic tissue (tumors contain a greater percentage of water than normal liver tissue).

The abdomen section covers anatomic variations as well as a diversity of disease processes and an up-to-date consensus of the significance of a few controversial findings.

The Ob-Gyn, perinatal section offers the expected tables and charts relating to gestational age and fetal growth retardation, plus pre-natal evaluation of fetal kidneys, amniotic fluid, conjoined twins and more.

The cardiac section delivers material on M-mode and two-dimensional mode. An enticing variety including papillary muscle dysfunction, aortic dissection, CO₂ contrast echocardiography and determination of pacing catheter position is covered.

The last section covers Doppler work including vascular disease and cardiac work. A final miscellaneous chapter covers bronchial cysts, parathyroid adenoma and breast and scrotal lesions.

Robert Penkaya, M.D. Evansville Diagnostic Radiology

International Health Services has published *Prospective Payment: What It Is/How To Cope.* The book presents an analysis of the DRG system and discusses at length various strategies for hospitals and medical staffs in the tasks of controlling costs without lowering quality of care.

Williams & Wilkins has released Maxillofacial Trauma by Dr. Robert H. Mathog. Thirty-five experts, worldwide, contribute to a complete coverage of all head and neck injuries from an interdisciplinary viewpoint. The book is offered on a 20-day trial free of charge.



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- How to keep the legal and ethical considerations of the collection process in perspective.

The Faculty

Both workshops will be conducted by professionals on the staff of the AMA Department of Practice Management. All are experienced educators in medical practice management and conduct educational programs nationwide for physicians, office managers, and medical assistants. An income tax deduction may be allowed for educational expenses undertaken to maintain or improve professional skills. See Treasury REGULATION, 1.162.5.

DATES AND LOCATIONS

Tuesday, June 5, 1984

Ramada Inn Indianapolis-Airport 5455 Bradbury Street Indianapolis, IN 46241 317 247-5171

Wednesday, June 6, 1984

Ball State University Student Center University and McKinley Streets Muncie, IN 47306 317 285-6396 Thursday, June 7, 1984

Marriott 305 East Washington Center Road Fort Wayne, IN 46825 219 484-0411

Friday, June 8, 1984

South Bend Marriott Hotel 123 North St. Joseph Street South Bend, IN 46601 219 234-2000



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NEWS NOTES

Indiana's Newest Journal

Indiana Family Practice Residency Journal is the newest thing out. Volume 1, No. 1 appeared, bright and shining, in January.

The new publication is sponsored by the Department of Family Practice of Indiana University School of Medicine, which provided the funds to support the first issue. A major pharmaceutical company of Indiana is reported to have agreed to provide financial support for future issues.

The editor is Dr. John D. Diaz, associate director of the Residency Program at Memorial Hospital of South Bend.

Dr. A. Alan Fischer, Indianapolis, is chairman of the Editorial Board. Family Practice Residency Program directors Richard Feldman, M.D., Beech Grove; Thomas A. Jones, M.D., Indianapolis; Richard Juergen, M.D., Fort Wayne; and Wallace M. Ayde, M.D., Evansville, are members of the Board.

The new journal will be published twice annually. It may be subscribed to

Indiana October 1984 Family Practice RESIDENCY Journal



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at the rate of \$5.00 per year. Subscription requests should be addressed to A. Alan Fischer, M.D., Department of Family Medicine, 1100 W. Michigan St., Indianapolis 46223.

New Name, Location

Drs. James W. Strickland, James B. Steichen, William B. Kleinman, Hill Hastings II and Richard S. Idler, Indianapolis, have changed their corporate name to Hand Surgery Associates of Indiana, Inc. They have relocated their practice to the Indiana Center for Surgery and Rehabilitation of the Hand, 8501 Harcourt Road, Indianapolis 46260.

Also moving into the facility is the Hand Rehabilitation Center of Indiana, Inc. The facility has been designed exclusively for the patient who requires specialized treatment of the hand and upper extremity.

License Renewal Time

The Medical Licensing Board of Indiana will mail notices in April for license renewal fees due June 30. The renewal fee is \$40, although a penalty fee of \$200 will be assessed if the renewal is not accomplished by Aug. 31.

Physicians who have moved since last receiving a renewal registration form should notify the Medical Licensing Board of their new address. Failure to renew will render a license to practice medicine invalid.

The Medical Licensing Board is located at 924 N. Pennsylvania, Indianapolis 46204—(317) 232-2960.

HOPE for Grenada

Shortly after the U.S. military sent the Cubans packing from the island of Grenada last November, Project HOPE—which previously had had a large part in training medical and paramedical personnel on the island—surveyed the situation and found that the medical situation needed urgent attention. Nearly half of the medical manpower pool on Grenada was Cuban—until last fall.

William B. Walsh, M.D., president of Project HOPE, has announced that actions have been initiated to provide personnel and medical supplies. HOPE's plan is to help meet the immediate needs of the people and to help make the Grenadan health system self-sufficient in the long term.

CME Quiz . . .

CONTINUED FROM PAGE 265

- 6. The following signs and symptoms are typical of bulimia *except*:
 - a. The patient's weight is within normal range for age and body build.
 - b. The patient usually has a grossly distorted body image.
 - c. The patient has a labile, at time almost histrionic affect.
 - d. The patient has feelings of guilt and self-recrimination following bingepurge behavior.
- 7. The following statements are true of eating disorders *except*:
 - a. Cultural emphasis on appearance and slimness may be a factor.
 - b. There appears to be a significant amount of binge-purge activity on college campuses.
 - c. Patients may need to be hospitalized to monitor their nutritional intake.
 - d. Family dynamics appear to have little importance.
- 8. The following is true regarding eating disorders except:
 - a. The hypophyseal-pituitary axis

- response is probably secondary to weight loss.
- Some of the patients may have difficulty with impulse control and reality testing.
- The eating disorder in part represents the patient's attempt to control her life and her environment.
- d. The problem never occurs in mothers.
- 9. The following is true regarding bulimia *except*:
 - a. The disorder is most common in males.
 - b. The binge-purge behavior typically occurs almost daily.
 - c. The patients often are involved in "who is in control" issues with parents.
 - d. There may be months of binge-purge abstinence interrupted by episodic binges.
- The following is true regarding bulimia excent:
 - a. Imipramine HC1 may be useful in treatment.
 - b. Developing ways to alter or cope with stress is useful.
 - e. Delining degree of independence from family may be useful.
 - d. Patients with bulimia never have trouble with their weight.

For the Asking . . .

Available to physicians for the asking are:

- About Your Medicines is a \$4.95 volume published by the U.S. Pharmacopeial Convention to provide advice about drugs to the public. A recent study to determine the best and most reliable of consumer-oriented books on medications, published in Patient Education and Counseling, rated About Your Medicines the best of the lot. The study was reported by three faculty members of the Purdue University School of Pharmacy and Pharmaeal Sciences. For a copy, send \$4.95 plus \$1 for shipping and handling to USP Dept. of Public and Professional Affairs, 12601 Twinbrook Parkway, Rockville, Md. 20852.
- · The AMA system of nomenclature, Current Procedural Terminology, has been adopted for reimbursement purposes by the Federal Health Care Financing Administration and has become the most widely accepted nomenclature for reporting physician procedures and services in health insurance programs. The 1984 edition of CPT contains a number of new features for identifying and coding medical procedures. \$25 per copy—less 10% discount for AMA members—plus shipping, handling and taxes where applicable. Write AMA Order Dept., OP 341, AMA, P.O. Box 10946, Chicago 60610.

- A 36-page brochure published by the 3M Company, "3M Hears You," classifies its full range of diversified products into 10 major markets served by the company. It is illustrated in color and describes key products, including those dealing with health care. For a free copy, write 3M Dept. 99/3M, P.O. Box 2202, Robbinsdale, Minn. 55422.
- A new AMA videocassette study course called "Developing a Marketing Plan for Your Medical Practice" introduces the physician to the concepts of marketing as they apply to a medical practice. Available for purchase (\$250 for AMA members and \$300 for nonmembers) or rental (\$70 for AMA members and \$85 for non-members). To order or to obtain more information, call 1-800-621-8335.
- The AMA's Physicians' Placement Service began offering free registration to members last month. PPS is a computerized information clearinghouse that provides listings of practice opportunities in nearly every medical specialty. PPS publishes two bimonthly registers. For further information, contact Joe Ann Jackson, (312) 645-4712.

I.U. Begins IVF Program

Indiana University Medical Center announces an in vitro fertilization program. Basically, the process includes capture of newly shed human egg and its fertiliza-

tion within a test tube with the husband's sperm. After an appropriate stage of growth in the test tube, the fertilized ovum is transferred to the woman's uterus.

The procedure has produced pregnancies in approximately 20% of all participants. Ninety per cent make it through the egg removal, fertilization and transfer stages, but only 20% of those individuals end up with a positive pregnancy test. Of that 20%, half will undergo a spontaneous miscarriage, usually within 13 weeks. The remainder can be expected to have a successful pregnancy.

There is no age limit for participants so long as the wife has the potential for ovulation. Only married couples will be considered, and the candidates must be in good health and a low anesthetic risk.

High Marks for Questran

Mead Johnson & Company's Questran (cholestyramine) was the drug used, in connection with diet, to lower blood cholesterol levels in a recent major study by the National Heart, Lung and Blood Institute. In addition to demonstrating that the drug Questran was a highly satisfactory agent for lowering cholesterol when used in connection with a proper diet, the study showed that such treatment lowers the mortality and morbidity of coronary heart disease.

- Physician Recognition Awards -



The following ISMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned, and is acceptable proof in most states requiring CME in re-registration that the mandatory hours of CME have been accomplished.



Angulo, Edilberto D., Munster Baghdassarian, Sahag, A., Munster Berkshire, Shaffer B., Columbus Bermudez, Nini M., Indianapolis Bhagwandin, Harry O., Indianapolis Cabrera, Juan C., Evansville Clevinger, William G., Kokomo Collins, Jack T., Bluffton Coons, Philip M., Indianapolis Cua, Rosita L., Indianapolis

Ferguson, William B., Lafayette Gold, Marvin E., Valparaiso Hannemann, Robert E., Lafayette Heck, Larry L., Indianapolis Holland, William M., Indianapolis LaSalle, Robert M., Wabash Lawton, Dennis F., Muncie Lee, Robert Y., Valparaiso Levin, Marc A., Hammond Masbaum, Ned P., Indianapolis

Mathews, James R., Evansville Miller, Edward D., Fort Wayne Schalliol, James P., Rochester Shanklin, Jack L., Vincennes Sonne, Thomas E., New Albany Teter, George V., Terre Haute Waksman, Alberto, Bluffton Wanner, Loren L., Bluffton Wass, Justin L., Indianapolis Willman, Joe L., Gaston

NEWS NOTES

Here and There . . .

- ... Dr. Isaac R. Hargett of Evansville has been named an official examiner by the American Board of Pediatrics.
- ... Dr. Dilip R. Kelekar of Michigan City has been elected to fellowship in the American Academy of Orthopaedic Surgeons.
- elected president of the medical-dental staff, St. Mary Medical Center of Gary and Hobart; Dr. Keshav D. Aggarwal is president-elect, Dr. George T. Clardy is secretary, and Dr. Raymundo L. Billena is treasurer
- dianapolis has been elected president of Methodist Hospital of Indiana; Dr. E. Henry Lamkin is vice-president, and Dr. Charles B. Carter is secretary-treasurer.
- Bend obstetrician and gynecologist 45 years, retired from practice in January.
- Wayne has been elected president of the medical staff, Parkview Memorial Hospital; Dr. Richard E. Tielker is president-elect, and Dr. Joseph H. Richardson is secretary-treasurer.
- elected president of the medical staff, Community Hospital, Anderson; Dr. Alvin L. Bridges is chief of staff, Dr. Bert I. Davis is vice-president, and Dr. Jon M. Maier is secretary-treasurer.
- ... Dr. Norman C. Estes of Indianapolis discussed "New Trends in Cancer Treatment" at a February meeting of the ACS's South Hamilton County Unit, Carmel.
- discussed hyperactivity in children at a February meeting of the Association for Children with Learning Disabilities.

- ... Dr. Terry R. Brown of Jasper discussed premenstrual syndrome at a February PMS workshop sponsored by the Southern Hills Mental Health Center and St. Joseph's Hospital.
- ... Dr. Robert G. Gilbert of Cannelton, radiologist at Perry County Memorial Hospital 31 years, retired from practice in January.
- ... Dr. Steven I. Lewallen of Bloomington has been elected president of the Monroe County Public Health Nursing Association.
- has been elected chief of the medical staff, Dunn Memorial Hospital; Dr. Benjamin J. Seligman is chief of staff-elect, and Dr. A.P. Shadwani is secretary-treasurer.
- has been elected chief of the medical staff, Gibson General Hospital; Dr. M.S. Krishna is vice-president.
- ... Dr. Jeffrey J. Kellams of Indianapolis is the new medical director of CPC Valle Vista Hospital; Dr. Robert E. Snodgrass is president of the medical staff. The new Greenwood facility is a specialty psychiatric and chemical dependency hospital.
- dependency hospital. . . . Drs. Mark I. Singer, Ronald C. Hamaker and Eric D. Blom of Indianapolis discussed their original work in vocal rehabilitation after laryngectomy at a January program in Bethesda, Md., sponsored by the National Cancer Institute.
- Noblesville discussed "Cancer: The Disease and its Treatment" at a January program sponsored by Riverview Hospital for the Cancer Support Group.
- ... Dr. Maurice E. John, a Jeffersonville ophthalmologist, has returned from a six-day visit to the Moscow Research

Institute of Eye Microsurgery; while there, he lectured on cataract surgery, performed radial keratotomy, and observed several new innovations in the surgical technique of correcting nearsightedness.

- ... Dr. Milton W. Erdel of Frankfort has been appointed to serve a four-year term as Clinton County health officer.
- tor of the Pulmonary Medicine Division, 1.U. School of Medicine, addressed the VI Regional Meeting, American College of Physicians, Chapter for the Central American Republics and the Republic of Panama. The meeting took place in Panama in February. His topics included cough in patients with normal chest x-rays, hemoptysis, hyperventilation syndrome, and sleep apnea syndromes.
- ... Dr. Donald A. Dian of the Caylor-Nickel Medical Center, Bluffton, conducted a seminar in February dealing with parent-adolescent relationships.
- Noblesville discussed premenstrual syndrome (PMS) in February as part of a spring Women's Luncheon Series sponsored by Riverview Hospital.
- ... Dr. Malcolm B. Herring of Indianapolis presented a paper last month at a meeting of the Central Surgical Association in Pittsburgh; it was entitled, "Endothelial Seeding of Dacron and Polytetrafluorethylene Grafts: The Cellular Events of Healing."
- ... Dr. Everett W. Gaunt, an Alexandria family physician 40 years, will retire from practice this month.
- dianapolis endocrinologist, has been elected a governor of the 57,000-member American College of Physicians; he will serve as ACP governor of Indiana for four years.
- Frederick B. Stehman of Indianapolis recently made a presentation to the National Cancer Institute site visit team on behalf of the Gynecologic Oncology Group of Philadelphia.
- ... Dr. Nicholas Egnatz of Hammond has been elected president of the medical staff, Our Lady of Mercy Hospital; Dr. Feliciano Jimenez is president-elect, Dr. Charles D. Egnatz is secretary, and Dr. Ramon Blanco is treasurer.



Do you have a new colleague who doesn't belong to the Indiana State Medical Association? Call Mrs. Rosanna Iler at (317) 925-7545 or 800-382-1721 (WATS) for a free membership kit.

New ISMA Members

The following physicians were welcomed in February as new members of the Indiana State Medical Association:

Steven J. Arnow, D.O., Lawrence-burg, ophthalmology

Jill J. Blacharsh, M.D., Bloomington, psychiatry

Fred O. Butler, M.D., Indianapolis, hematology

Rodney E. Corson, M.D., Indianapolis, emergency medicine

William L. Curran, Jr., M.D., Jasper, occupational medicine

Robert J. Davidson, M.D., Evansville, family practice

David C. Esarey, M.D., Shelbyville, pediatrics

David A. Fisher, M.D., Indianapolis, resident member

Richard M. Forster, M.D., South Bend, anesthesiology

Mark H. Fox, M.D., Indianapolis, diagnostic radiology

Alan E. Handt, M.D., Indianapolis, internal medicine

Harold G. Hebard, M.D., Lafayette, family practice

Jose G. Ibanez, M.D., Lawrenceburg, urological surgery

Stephen H. Kliman, M.D., Lafayette, cardiovascular diseases

Ronald D. Kracke, M.D., Anderson, family practice



Mark E. Manship, M.D., Salem, family practice

James R. Melloh, M.D., Rising Sun, family practice

Tasneem Mirza, M.D., Evansville, neonatal-perinatal medicine

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News from the AMA

- The AMA Board of Trustees will be expanded to include a resident member and a non-voting medical student member, following action by the House of Delegates at the 1983 interim meeting. Candidates for the resident position will be endorsed and nominated by the Resident Physicians Section, with election by the House. The medical student member will be appointed annually by the Board of Trustees from nominees submitted by the Medical Student Section.
- The physicians' service component of the Consumer Price Index increased 7.5% during 1983, the same rate of increase as the year before. The hospital room component rose 9.3% during 1983, down from 13.3% in 1982, according to the AMA Center for Health Policy Research. The overall CPI rose 3.8% for 1983, the lowest increase since 1972.
- Medicare's annual deficit will amount to more than \$138 billion by the year 2005—even with the DRG system in place—unless there are significant increases in projected revenues, according to Dr. James H. Sammons, executive

- vice president of the AMA. He said the cost-cutting potential of DRGs is far less than most people believe. He said employee wages alone account for up to 60% or more of a hospital's fixed overhead cost. "Our elected officials in government will have to put their appropriations where their social promises are, and have the courage to act accordingly, even if that means raising taxes of one kind or another."
- The public gave physicians a very favorable evaluation on accessibility, knowledge of medicine, dedication, and humility, according to a public opinion poll released by the AMA Dept. of Survey and Opinion Research. However, the profession did not score as well in the areas of fees/income, M.D./patient interactions, access to care among the poor and elderly, and public faith in physicians. The poll showed a widening gap between the respondents' generally positive image of their own physicians, and their somewhat more negative view of the profession as a whole.
- The AMA's annual meeting will be conducted June 17-21 in Chicago. The interim meeting will be held Dec. 2-5 in

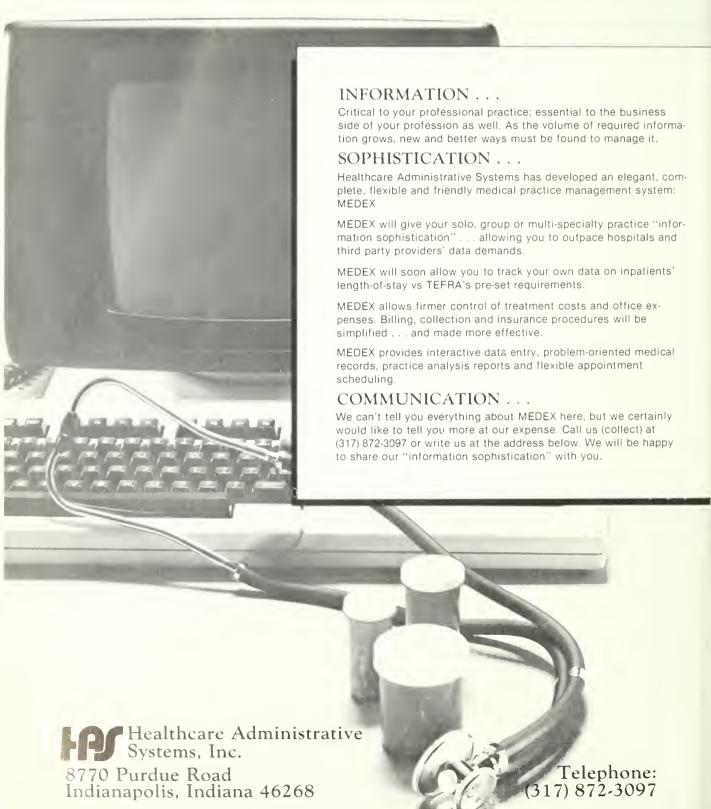
Honolulu.

• Donald Young, M.D., has been appointed executive director of the Prospective Payment Assessment Commission. Dr. Young previously was deputy director of the Bureau of Eligibility, Reimbursement and Coverage of the Health Care Financing Administration.



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OBITUARIES

H. Clair Amstutz, M.D.

Dr. Amstutz, 74, a Goshen general practitioner, died Feb. I at Memorial Hospital, South Bend.

He was a 1938 graduate of Indiana University School of Medicine.

Dr. Amstutz, a former president of the Elkhart County Medical Society, served 10 years as secretary of the Goshen General Hospital medical staff. He was chairman for 15 years of the Mennonite Mental Health Services and established the Student Health Service at Goshen College, where he was college physician for 25 years as well as a science instructor. In recent years he had led Goshen College students in study-service terms in Honduras and Nicaragua. He authored several books and was writing medical columns for three periodicals at the time of his death.

Thomas J. Quilty, M.D.

Dr. Quilty, 62, a Goshen physician, died Jan. 8 at Elkhart General Hospital.

He was a 1945 graduate of the University of Illinois College of Medicine and served in the Army following World War II.

Dr. Quilty was a former president of the Elkhart County Medical Society. He was a diplomate of the American Board of Otolaryngology.

Frederick L. Kiechle, M.D.

Dr. Kiechle, 68, an Evansville pathologist, died Jan. 25 at Deaconess Hospital.

He was a 1944 graduate of Indiana University School of Medicine and later served two years in the Air Force.

Dr. Kiechle, a devotee of German folk music, was a composer and pianist. He was a member of the American Society of Clinical Pathologists.

Alfred Chona, M.D.

Dr. Chona, 57, an East Chicago general surgeon, died Feb. 6 at his home.

He was awarded the M.D. degree in 1956 in Bogota, Colombia.

Dr. Chona had practiced in East Chicago since 1976. He was a part-time emergency room physician at hospitals in Dyer, Crown Point and Hammond.

Edward B. Smith, M.D.

Dr. Smith, 71, a former Indianapolis pathologist, died Oct. 30, 1983, in Inverness, Fla.

He was a 1938 graduate of Indiana University School of Medicine where he was a former professor of pathology.

Dr. Smith, an Army veteran of World War II, practiced in Florida in recent years. He became chief pathologist and medical director of Citrus Memorial Hospital in Inverness in 1977; a new laboratory at the hospital will be named in his honor. His memberships included the College of American Pathologists, American Academy of Forensic Sciences, and the American Society of Hematologists.

K. Randolph Manning, M.D.

Dr. Manning, 64, an Indianapolis orthopedic surgeon, died Feb. 3 at Methodist Hospital, Indianapolis.

He was a 1943 graduate of Northwestern University Medical School.

Dr. Manning was chief of orthopedic surgery at Methodist Hospital, an associate clinical professor of orthopedic surgery at the 1.U. School of Medicine, and medical director of Crossroads Rehabilitation Center. He was a diplomate of the American Board of Orthopaedic Surgery and was a member of the American Academy of Orthopaedic Surgeons.

William J. Miller, M.D.

Dr. Miller, 62, a retired Fort Wayne physician, died Jan. 11 at his home.

He was a 1945 graduate of Indiana University School of Medicine. He retired in 1982.

Dr. Miller had practiced in Fort Wayne since 1955. He was certified by the American Board of Internal Medicine and was a member of the American Diabetes Association.

Howard B. Hamilton, M.D.

Dr. Hamilton, 73, a retired Indianapolis physician, died Feb. 11 at his home.

He was a 1936 graduate of Rush Medical College.

Dr. Hamilton, a specialist in industrial medicine, retired in 1975. He had been a medical examiner for the former Pennsylvania Railroad in Philadelphia.

H. Eugene Newby, M.D.

Dr. Newby, 65, a Sheridan general practitioner, died Jan. 28 at Methodist Hospital, Indianapolis.

He was a 1945 graduate of Indiana University School of Medicine.

Dr. Newby, a former president of the Hamilton County Medical Society, was named the Sheridan Jaycees Outstanding Citizen in 1967.

William C. McConnell, M.D.

Dr. McConnell, 76, a Sunman (Ripley County) general practitioner, died Jan. 11 at St. Vincent Hospital, Indianapolis.

He was a 1932 graduate of Indiana University School of Medicine and was an Army veteran of World War II.

Dr. McConnell was a member of the American Academy of Family Physicians and the ISMA Fifty Year Club.

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PUBLIC HEALTH NOTES. . .

CONTINUED FROM PAGE 239

more than further limit the ability of the physician to provide appropriate care.

The futility in attempting to legislative or regulate the quality of health care to the elderly without a simultaneous approach to, and understanding of, the inherent attitudinal conflict seems obvious. We can force a physician, through regulation, to see his nursing home patient once a month but does that change his attitude toward the problems he faces with that patient? I doubt if it does.

Is it possible to change the social attitude toward nursing homes by requiring relatives to visit on a regular basis? Again, I doubt if it is, and it might make matters worse.

Can we improve the care in nursing

homes by decreasing the cost? By today's standards it appears that attempts to decrease the cost of care of this population will do little more than decrease the quality (whatever it may be at the moment) and/or availability of that care. The intention of public health programs is to improve the quality of life of the residents in nursing homes. However, implementing rules will do little to improve conditions without the interest and concern of consumers, families, the nursing home industry, advocate groups for the elderly, and health care professionals.

Cooperation Necessary

In all of this, we can be sure that the problems surrounding health care of the elderly will challenge us for many years to come. These are important issues which we must face directly and energetically. The resolution will be slow and sometimes painful. However, a careful analysis and calculated approach will do much more for our aging population than any short-sighted, emotional response directed at simplifying a complex problem which is poorly understood.

We have a strong mandate to deal with the needs of our citizens with compassion and concern but, above all, with a great sense of awareness and responsibility. Together we need to take the lead in a careful study of the health problems of the elderly so that the recommendations for corrections are well thought out and have the best possible chance of success. Now for 1984 Resort & Marina

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References: 1. Kales J et al: Clin Pharmacol Ther 12:691-697, Jul-Aug 1971. 2. Kales A et al: Clin Pharmacol Ther 18:356-363, Sep 1975. 3. Kales A et al: Clin Pharmacol Ther 19:576-583, May 1976. 4. Kales A et al: Clin Pharmacol Ther 32:765-883. May 1976. 4. Kales A et al: Clin Pharmacol Ther 32:781-788, Dec 1982. 5. Frost JD Jr., DeLucchi MR. J Am Genatr Soc 27:541-546, Dec 1979. 6. Kales A, Kales JD J Clin Pharmacol 3:140-150, Apr 1983. 7. Greenblatt DJ, Allen MD, Shader RI. Clin Pharmacol Ther 21:355-361, Mar 1977. 8. Zimmerman AM. Curr Ther Res 13:18-22, Jan 1971. 9. Amrein R et al: Drugs Exp Clin Res 9(1):85-99, 1983. 10. Monti JM. Methods Frind Exp Clin Pharmacol 3:303-326, May 1981. 11. Greenblatt DJ et al: Sleep 5(Suppl 1):S18-S27, 1982. 12. Kales A et al: Pharmacology 26:121-137, 1983.

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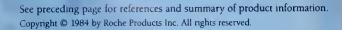
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ABOUT THE COVER



Information concerning physician impairment was exchanged during a recent ISMA seminar on the subject. Among the guest speakers was Dr. David Canavan of New Jersey (upper left). More photos and details begin on page 390.

-PHOTOS BY KARYL HANCOCK

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That observation is as true today as it was when published on Jan. 15, 1908.

MUSEUM NOTES

CHARLES A. BONSETT, M.D., Indianapolis



PERCEPTIVE READER from Terre Haute raises a very interesting question regarding the priority of discovery of the contagious nature of child-bed or puerperal fever. His question was prompted by a brief note in the March issue of Indiana Historical Society's acquisition of rare medical works by Dr. Oliver Wendell Holmes, credits him with the discovery.

The reader inquires: "It always has been my impression that Ignaz Phillip Semmelweis was responsible for this discovery. Am I wrong?"

Actually, Dr. Holmes was first. He published in 1843, in the *New England Quarterly Journal of Medicine* (1842-43, I, 503), one year before Semmelweis received his medical degree.

Ralph Major, M.D., in his *History of Medicine* (Vol. II, p. 758) states: "... (In 1843) he (Holmes) wrote an epochal essay on the 'Contagiousness of Puerperal Fever,' a medical classic. In this, he pointed out that the disease was frequently carried by the physician from one patient to another . . . This essay was his greatest contribution to medicine and appeared five years before the (initial) work of Semmelweis. . . ."

Dr. Holmes was a man of many interests. He was not an obstetrician, nor was he a proselytizer or martyr. Dr. Semmelweis was all of these. Dr. Holmes' paper was severely criticized by his contemporaries and then ignored. Had the veracity of his concepts been recognized, the work of Semmelweis would have been less impressive.

As Holmes moved on to other interests, Semmelweis made his own discovery independently, then, with the tenacity of a bulldog, put his concepts to the test, and proved their merit. He began by requiring all attendants in his obstetrical clinic (1847) to first wash their hands in a solution of calcium chloride before performing an examination or delivery. By this means he demonstrated that the problem could be controlled. His work, however, like that of Holmes, brought only criticism but, unlike Holmes, Semmelweis

persevered. It was the knowledge gained from years of practical experience that filled the pages of his influential work, "Die Aetiologic, der Begriff und die Prophylaxis des Kindbettfiebers," published in 1861.

Although Holmes was the first to publish, he had relatively few readers and

general lack of appreciation of the value of sanitation and cleanliness. A review of the Index of the Transactions of the Indiana State Medical Society indicates not a single paper on this subject. This could not have been a subject of great concern to the antebellum Hoosier physician



very little if any influence on the practice of obstetrics. Dr. Semmelweis, on the other hand, had a tremendous influence in overcoming the prejudice, the inertia and the ignorance of his generation of physicians in this area. Hence, it is the name of Semmelweis rather than that of Holmes with which most present-day physicians associate the name of puerperal or child-bed fever.

What about the question of child-bed fever in Indiana at this period of time? Since there were no hospitals or obstetrical clinics in the state at this period, the possibility for the wholesale spread of the disease did not exist. The problem itself probably occurred numerous times as isolated examples because of the crude living conditions of the pioneer and the

He had numerous other problems, however, and these and other aspects of the practice of medicine in pre-Civil War Indiana are now on display in an exhibit at the Indiana Historical Society (Third floor, Indiana State Library, 315 W. Market St., Indianapolis 46202). The exhibit is open Monday through Friday from 9 a.m. to 4:30 p.m. The exhibit will remain on display until Aug. 31.

A book by Katherine Mandusic McDonell, Medicine in Antebellum Indiana: Conflict, Conservatism, and Change, has just been published to coincide with the opening of the exhibit. This is available for \$3, postpaid, from the address given above. (Members of the Indiana Historical Society receive the publication at no cost.)

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Toll-free in Ohio, 1-800-282-7515 Toll-free outside Ohio, 1-800-742-1275

FUTURE FILE

Emergency Medical Care

The 14th annual Emergency Medical Care Seminar sponsored by the Kentucky Medical Association will be conducted June 5, 6 and 7 at the Executive West Motel, Louisville.

The program is approved for 15 hours of AMA Category I CME credit and for 11½ AAFP prescribed hours. Credit has been requested from the American College of Emergency Physicians. Registration is \$40 per day for non-KMA members; the fee includes materials, breaks, luncheons and social activities.

For more information contact Don R. Chasteen, KMA, 3532 Ephraim Mc-Dowell Drive, Louisville 40205—(502) 459-9790.

Health Promotion

The Indiana State Board of Health will conduct a two-day health promotion conference June 21-22 at the Holiday Inn, Jasper.

The latest information, organization and programming in the health promotion field will be presented, to include school, community, hospital and industry health programs. An in-depth session on health risk appraisal also will be featured, and nationally recognized experts will provide new insights into health care.

The goal of the conference is to stimulate an organized approach to health education and risk reduction, and to enhance existing health promotion efforts in Indiana.

For registration information, contact Barbara Alborn, State Board of Health—(317) 633-0291.

Alcohol & Drug Abuse

"The School on Alcoholism and Other Drug Dependencies" will be conducted for its 33rd annual session by the University of Utah June 17 to 22. A faculty of more than 135 prominent lecturers and consultants will be included. Tuition is \$175. Lodging is available in residence halls on campus. Hotels and motels will be available off campus.

For information write or phone University of Utah School on Alcoholism etc., P.O. Box 2604, Salt Lake City, Utah 84110—(801) 533-7087.

Cardiac Arrhythmias

"Topics in Cardiovascular Diseases: Cardiac Arrhythmias" is the title of a two-day course to be conducted June 1 and 2 in Baltimore. It will be sponsored by the American Heart Association, Maryland Affiliate.

For full information, contact Mrs. Silverstein, 415 N. Charles St., P.O. Box 17025, Baltimore 21203—(301) 685-7074.

Medical Hypnosis

The sixth annual Institute on Medical Hypnosis: Techniques and Clinical Applications will meet June 8 to 10 at the Walter G. Ross Hall, George Washington University, Washington, D.C. Registration fee is \$275, residents and interns \$125.

Write to Greg P. Thomas, Office of CME, George Washington University Medical Center, 2300 K Street, N.W., Washington, D.C. 20037.

Computer Showcase

The first annual Cincinnati Computer Showcase Expo will be presented June 14 to 17 at the Cincinnati Convention Center for business, professional and corporate users of small computer and word processing systems. More than 100 national and local vendors will exhibit small systems, associated peripherals, software, services and supplies. Show hours are 10 a.m. to 7 p.m. Admission is \$7.50.

Internal Medicine Review

The fourth annual Review of Internal Medicine will be conducted Aug. 6-10 by the Scott and White Clinic at Lakeway Resorts, Tex.

For details contact the Scott and White Clinic, CME Office, 2401 S. 31st St., Temple, Tex. 76508—(817) 774-3047.

The Journal of the American Medical Association publishes a list of CME courses for the United States twice yearly. The January listing features courses offered from March through August; the July listing features courses offered from September through February.

'The Costly High'

A one-day workshop on cocaine is scheduled by Koala Centers, Indianapolis, for Saturday, May 19.

It is open to the public as well as professionals in the field of alcoholism and drug abuse. The workshop is titled "The Costly High."

Max Schneider, M.D., will be the main presenter and will look at social and treatment implications of cocaine. Dr. Schneider is associate director of Alcohol Recovery Services, University of California (Irvine) School of Medicine.

The workshop will be in the Sheraton-Meridian Hotel, 2820 N. Meridian St., Indianapolis.

Information can be obtained from Ron Brown, Koala Centers, Suite 203, 9011 N. Meridian St., Indianapolis 46260—(317) 844-7070.

Indiana University CME

For the Primary Care Physician

May 22-23—Acute Myocardial Infarction—Indianapolis.

June 2—Diabetes Update—Indianapolis. June 19-21—Family Practice Review, Part 11—Sheraton Meridian, Indianapolis.

For the Specialist

May 12—Pediatric Anesthesia—Indianapolis.

May 15-17—Abdominal Imaging and the Gastrointestinal Tract—Holiday Inn North, Indianapolis.

May 16—Perinatal-Neonatal Medicine—Merrillville.

May 23-24—Multidisciplinary Child Care Conference—Indianapolis.

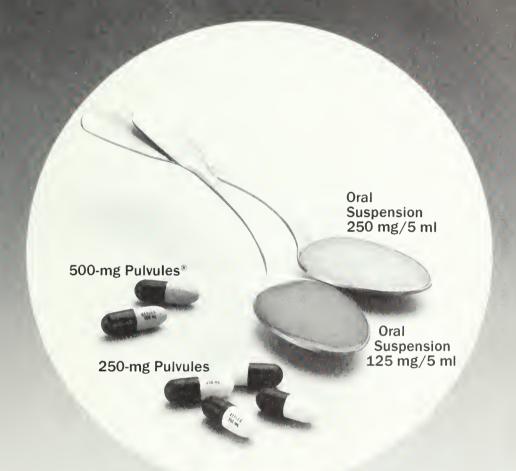
For additional information, contact Indiana University School of Medicine, CME Division, 1120 South Drive, Indianapolis 46223—(317) 264-8353.

15th Pathology Congress

The International Academy of Pathology will conduct its XV International Congress at the Fontainebleau Hilton in Miami Beach Sept. 3 to 7.

Write the United States-Canadian Division of the Academy at 1003 Chafee Ave., Augusta, Ga. 30904 for full information.

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Additional information available to the profession on request.



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WILLIAM M. DUGAN, JR., M.D.

Clinical Oncology Center Methodist Hospital of Indiana, Inc.

American Cancer Society, Inc. 4755 Kingsway Dr., Suite 100 Indianapolis 46205

New information from Indiana Division

EVERY PHYSICIAN'S OFFICE— A CANCER DETECTION CENTER

CANCER CORNER

Slide Sets for Professional Education

Please note in the Professional Education Materials Catalog that there are very good slide sets with accompanying scripts for use by Professional Education Chairs for programs in their local units. These slides can be used in their entirety, or physicians may select whatever they find useful to present in combination with their own materials. It is recommended that physicians use these for lectures for professional education programs. Just a few of the available slide sets are listed here:

- 1) Blood Components in Cancer Therapy—Code #3802
- 2) Detection and Diagnosis of Cervical Cancer—#3801
- 3) The Diagnosis of Prostatic Cancer—Code #3803

Future Meetings

National Tumor Registrars Assn.— May 15-18, Hotel Continental, Chicago. Tenth annual meeting. Computers and tumor registry applications, current cancer concepts, fundamental and advanced tumor registry application, central registry organization and management. Contact Suzanna Hoyler, American College of Surgeons, 55 E. Erie St., Chicago 60611—(312) 664-4050.

National Conference on Radiation Oncology 1984—June 14-16, San Francisco. Address inquiries to: American Cancer Society, National Conference on Radiation Oncology 1984, 777 Third Avenue, New York, N.Y. 10017.

Prevention of Cancer—June 7, Buffalo, N.Y. Address inquiries to Gayle Bersani, R.N., Cancer Control Coordinator, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, N.Y. 14263.

Scripps Cancer Symposia—Oct. 18-20, Sheraton Harbor Island Hotel, San Diego. Eighth annual cancer symposium for physicians and fourth annual cancer symposium for nurses, sponsored by Scripps Memorial Hospital Cancer Center. Contact Nomi Feldman, Conference Coordinator, 3770, San Diego 92121, phone 619-453-6222.

Seventh Annual San Antonio Breast Cancer Symposium—Dec. 7-8, San Antonio. Deadline for abstracts of proffered papers on the experimental biology, etiology, diagnosis and therapy of breast cancer are due by June 1. Contact Terri Coltman, R.N., Cancer Therapy and Research Center, 4450 Medical Dr., San Antonio 78229—512-690-0655.

Master's Program in Cancer Nursing

A brochure is available which describes the National ACS's scholarship program to support nurses who are interested in obtaining a master's degree with a specialty in oncology nursing. The brochure and application form have been revised for 1984-85. Copies of the brochure and application forms may be ordered from the Division Office Distribution Department. Specify Codes:

- 1) Scholarship Brochure—#0306
- 2) Application Form—#0306.01
- 3) Response Card—#0306.02

Mammography

Low-dose breast x-rays—mammography—is giving hope that the leading cause of cancer deaths in women will be greatly diminished.

We urge women without symptoms of breast cancer, ages 35 to 39, to have one mammogram for the record, women 40 to 49 to have a mammogram every one to two years, and women 50 and over, one a year. Breast self-examination is also an important health habit and should be practiced monthly. Ask your local Cancer Society for free leaflets on both subjects.

New Publication: Cancer Risks of Medical Treatment

In this two-part article reprinted from the *Clinical Bulletin*, Dr. David Schottenfeld, chief of the Epidemiology and Preventive Medicine Service and director of Cancer Control at Memorial Sloan-Kettering Cancer Center, explains the testing procedures required by the Food and Drug Administration to ensure the safety and efficacy of any new drug before it can be introduced on the market.

Copies may be ordered through the Division Office Distribution Department at no charge. (Code #3314).

Publication Available: The Hospice Concept

Copies are now available of The Hospice Concept, Code #3403. Please note: Backorders will *not* be filled. Please re-order.

This publication should be of special interest and assistance to all involved in the care of the terminally ill patient. The authors discuss basic hospice characteristics, the role of nursing in hospice care, and symptom control utilizing pharmacologic, psychologic, and spiritual aids. Other subjects include the emotional relationship between patient, family, and hospice personnel, bereavement follow-up, and hospice medical care and costs.

This piece can be used at meetings on the subject of the psychosocial aspects of cancer and can be used to help many health care professionals understand the role of hospice in cancer care.

Units should submit new orders to the Division Office Distribution Department of the American Cancer Society.

kNOw Smoke Computer Discs

The kNOw Smoke Computer Discs are available from the Division Office on a loan basis.

The kNOw Smoke is a computerized education and action program for teenagers, ages 12-18, who smoke cigarettes. It is available on a 5-inch floppy disc for the Apple II or TRS 80 Model III format. This interactive computer-assisted program provides facts and personalized information as well as detailed suggestions for quitting smoking on a printout at the end of program. Teachers' guides and instructions provided. Contact the Division Director of Public Education to order.

Constitution and Bylaws

Indiana State Medical Association

This Printing Incorporates Amendments of the 1983 House of Delegates

Indiana State Medical Association 3935 North Meridian Street Indianapolis, Indiana 46208

CONSTITUTION

Article I - Title and Definition

The name of this organization is the Indiana State Medical Association. It is the federacy of Indiana county medical societies.

Article II - Purposes

The purposes of this Association shall be to federate and bring into one compact organization the medical profession of the state of Indiana, and to unite with similar societies of other states to form the American Medical Association; to extend medical knowledge and advance medical science; to elevate the standard of medical education; to promote friendly relations among physicians; to protect its members against imposition; and to enlighten and direct public opinion in regard to the great problems of medical care and public health so that the profession shall become more capable and honorable within itself and more useful to the public in the prevention and cure of disease and in prolonging and adding comfort to life.

Article III - Component Societies

Component societies are those county and district medical societies contained within the state of Indiana, and who hold charters from this Association.

Article IV - Members

The Indiana State Medical Association is composed of individual members of county medical societies and others as shall be provided in the Bylaws.

Article V - House of Delegates

The legislative and policy-making body of the Association is the House of Delegates composed of elected representatives and others as provided in the Bylaws. The House of Delegates shall transact all business of the Association not otherwise specifically provided for in the Constitution and Bylaws and shall elect the general officers, except trustees, as otherwise provided in the Bylaws.

Article VI - Officers

The general officers of the Association shall be a president, president-elect, immediate past president, treasurer, assistant treasurer, speaker, vice speaker, trustees and the executive director. Their qualifications and terms of office shall be provided in the Bylaws.

Article VII - Trustees

The Board of Trustees is composed of trustees and alternate trustees elected by the component district medical societies, and the president, the president-elect, treasurer, immediate past president, the assistant treasurer, with power to vote only in the absence of the treasurer, and the speaker and vice speaker without power to vote and the executive director without power to vote. The alternate trustees have power to vote only in the absence of the trustee.

The Board of Trustees shall have charge of the property and financial affairs of the Association and shall perform such duties as are prescribed by the law governing directors of corporations or as may be prescribed in the Bylaws.

Article VIII - The Convention

The House of Delegates and the general scientific program shall be convened annually and at such other times as deemed necessary or as provided in the Bylaws, in cities recommended by the Board of Trustees and approved by the House of Delegates.

Article IX - Funds, Dues and Assessments

Funds may be raised by annual dues or by assessment of the active members on recommendation of the Board of Trustees and after approval by the House of Delegates, or in any other manner approved by the Board of Trustees as provided in the Bylaws.

Article X - Amendments

The House of Delegates may amend this Constitution at any convention provided the proposed amendment shall have been introduced at the preceding annual convention and provided two-thirds of the voting members of the House of Delegates vote approval and provided that it shall have been published twice during the year in INDIANA MEDICINE.

BYLAWS

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OF THE

INDIANA STATE MEDICAL ASSOCIATION

- 1.00 MEMBERSHIP QUALIFICATIONS, ELECTIONS AND RIGHTS
 - 1.01 CATEGORIES: Categories of membership are: 1) Regular;
 - 2) Dues Exempt; 3) Intern and Resident; 4) Medical Student;
 - 5) Distinguished; 6) Honorary.
 - 1.0101 REGULAR MEMBER: The term "Regular Member" as used in these Bylaws shall be: 1) A person who holds the degree of Doctor of Medicine or Bachelor of Medicine, or who holds an unrestricted license to practice medicine. 2) A member in good standing of a component county society and who has paid to this Association annual dues, provided, however, that 3) the person is a citizen of the United States of America, or has filed the declaration of intention of becoming a citizen and the first citizenship papers are in full force and effect.
 - 1.0102 DUES EXEMPT MEMBER: The term "Dues Exempt Member" as used in these Bylaws shall include the following:
 - 1.010201 Senior Member. Senior Members shall be eligible for Senior Membership on January 1 following their 70th birthday and they shall be physicians of the state of Indiana and who have held their membership in the Indiana State Medical Association for 20 years or more; or who have held membership in the Indiana State Medical Association or in some one or more other like state organization(s) which is a component state organization of the American Medical Association, for a combined total of 20 years or more, and who, upon their application, have been certified to the Executive Director as eligible for such membership by the county societies of which they are members. It shall be the duty of the county medical society to verify, through the office or offices of any other state organization or organizations, the fact of membership therein when such membership is claimed as part compliance with the eligibility requirement of 20 years of membership.
 - 1.010202 Disabled Member. Disabled Members shall consist of physicians of the state of Indiana who are certified by a member physician to be permanently disabled and no longer able to practice medicine. Proof of permanent disability shall be by notification to the Executive Director of the Association by the secretary of the county medical society in which the permanently disabled physician holds membership.

- 1.010203 Inactive Membership. Members who decide voluntary inactivity prior to the age of 70 shall be exempt from payment of membership dues for the duration of their inactive status when notification is received by the Executive Director of the Association from the secretary of the county medical society in which such inactive member holds membership. In deciding whether to approve a member's eligibility the county medical society shall determine that the member has ceased the practice of medicine in the state of Indiana.
- 1.010204 Financial Hardship. In the event the county relieves a member from the payment of dues because of financial hardship, the secretary of the county medical society shall recommend in writing to the Executive Director of ISMA the relief from State Association dues of said member of the society, showing why such recommendation should be granted.
- 1.0103 INTERN AND RESIDENT MEMBER: Interns and Residents who hold membership in the Indiana State Medical Association shall have all the rights and privileges of this Association.
- 1.0104 MEDICAL STUDENT MEMBER: Medical students who attend an accredited medical school in Indiana are members of this Association.

 Student members may subscribe to INDIANA MEDICINE.

Medical Student Members may be represented in the House of Delegates with the power to vote. Medical student members may hold office as stated in 3.0212. They shall be entitled to send one student delegate or one student alternate delegate to the House of Delegates. Student Delegate and Alternate are to receive INDIANA MEDICINE free of charge.

- 1.0105 DISTINGUISHED MEMBER: Members who have fulfilled the American Medical Association's Physician Recognition Award requirements of 150 hours for three years of continuing medical education as a minimum shall be designated as Distinguished Members.
- 1.0106 HONORARY MEMBER: Honorary Members shall consist of physicians, teachers, scientists and others of distinction who have rendered highly meritorious service to the profession of medicine, upon whom the Association may, through action of the House of Delegates, desire to bestow such membership as a special honor. Honorary members hereafter shall hold such membership as an honor and distinction and by invitation may attend meetings of the Association. They shall not be required to pay dues in the State Association. Such honor may only be bestowed by a vote or acclamation of the House of Delegates.
- 1.02 QUALIFICATIONS: The Regular, Dues Exempt, Distinguished and Resident Members of this Association shall be the members of the component county medical societies and no county medical society shall grant membership therein on a basis that does not include membership in the district medical society and in the Indiana State Medical Association.
- 1.03 RIGHTS, PRIVILEGES AND RESPONSIBILITIES OF MEMBERS:

- 1.0301 Rights and Privileges by Membership Category: All members of ISMA may attend the Annual Convention. With the exception of Honorary Members, all ISMA members are eligible to vote and hold office as specified elsewhere in these Bylaws. Medical Student Members may participate in the democratic process as defined in 1.0104.
- 1.0302 Attendance at Annual Convention: Members attending the Annual Convention and other meetings shall register by indicating the component society of which they are members. At the Annual Convention when membership has been verified, by reference to the roster (students excepted) of members, they shall receive a badge which shall be evidence of their right to all the privileges of membership at that convention. Members may not take part in any of the proceedings of an Annual Convention until they have complied with the provisions of this section.
- 1.0303 Suspension or Revocation of License: No person whose license to practice medicine has been suspended or revoked or who is under sentence of suspension or expulsion from a component society, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Association or of a component county society, or shall said person be permitted to take part in any of their proceedings until the license and/or county membership has been restored. This shall not apply to physicians who have surrendered their license because of retirement under the provisions of the Medical Practice Law.

2.00 INCOME AND EXPENSES

- 2.01 INCOME: Funds for carrying on the activities of the Association shall be raised by the following means:
 - 2.0101 Dues: Membership dues to be collected may be collected by the Indiana State Medical Association or by the component county societies. The amount of dues of each component society shall be fixed by the society itself, and the amount of dues for this Association shall be fixed from time to time by the House of Delegates.

Dues are payable by January 15, and become delinquent on that date. The Board of Trustees shall have the power to suspend any member who has not paid dues in full by April 30. The member shall sacrifice all rights and privileges of membership of this Association until said annual dues are received in full by the Indiana State Medical Association. For new members joining ISMA, dues will be calculated on a pro-rated monthly basis.

2.010101 Dues Refund: A request for refund of dues will be acted upon by the Board of Trustees of the Indiana State Medical Association in its wisdom. A letter of certification from the county society secretary to the Executive Director of the Indiana State Medical Association to request an exemption of dues must state that the county is also exempting said dues. Upon request and approval, dues will be refunded on

a monthly pro-rata basis. Dues Exempt members may receive INDIANA MEDICINE upon payment of the applicable subscription price set by the ISMA Board of Trustees. With the exception of Senior Members, all Dues Exempt Members will be reviewed annually, to determine their eligibility, by their county medical societies.

- **2.010102** Reduced Dues: The Indiana State Medical Association dues for Regular Members in their first year of practice following formal training shall be one-half the amount as may be established by the House of Delegates. County medical societies are encouraged to follow the same policy.
- 2.010103 Change in Dues Structure: The final vote on any issue calling for changes in dues or in dues structure shall be by roll call vote of the House of Delegates. Each member's vote shall be permanently recorded.
 - 2.0102 Voluntary contribution.
- 2.0103 Revenues derived from the Association's publications.
- 2.0104 Revenue derived from ISMA activities or services approved by the Board of Trustees.
- 2.0105 Assessments approved by the House of Delegates.
- 2.02 EXPENSES: Funds shall be appropriated by the Board of Trustees to defray the expenses of the Association, for publications, and for such other purposes as will promote the welfare of the profession. All motions and resolutions recommending the appropriation of funds by the House of Delegates must be referred to the Executive Committee for recommendation before final action is taken by the House of Delegates.

3.00 CONVENTION AND MEETINGS

- 3.01 ANNUAL CONVENTION: The Association shall hold a Convention at least annually during which the business and legislative sessions of the House of Delegates shall be held.
 - 3.0101 Selection of Site: The House of Delegates shall select the place five years in advance of holding the Annual Convention. The time for the Convention shall be fixed by the Board and the Board shall have the power also to change the place for holding the Convention where conditions may create difficulties in holding a successful Convention at the place designated by the House of Delegates. Any of the component member county societies wishing to invite the Indiana State Medical Association to hold its Annual Convention in its locality shall submit an invitation in writing at least five years in advance to the Board of Trustees. The Board of Trustees shall make an investigation of the facilities and in turn make a recommendation for the location of the Annual Conventions for concurrence by the House.
- 3.02 BUSINESS AND LEGISLATION MEETINGS HOUSE OF DELEGATES (Referred to elsewhere in these Bylaws as House)

- 3.0201 Composition: The House of Delegates shall be the legislative and policymaking body of the Association and shall consist of voting and non-voting members.
 - Only members of the House of Delegates are entitled to speak on the floor of the House except as defined in 3.0210.
 - 3.020101 Voting Members: 1) Delegates or the designated Alternates, elected by the component county societies; 2) Trustees or the designated Alternates, 3) Speaker, 4) Vice-Speaker, 5) Past Presidents.
 - 3.020102 Non Voting Members: 1) The Section Delegate or designated Alternate Section Delegate elected by the respective section shall also be a member, 2) President, 3) President-Elect, 4) Executive Director, 5) Treasurer, 6) Assistant Treasurer, 7) the Delegates and Alternate Delegates to the American Medical Association.
 - 3.020103 No delegate member of the House shall lose the right to vote by virtue of any office that delegate may hold.
- 3.0202 Parliamentarian: The Speaker may appoint a Parliamentarian for the Annual Convention, who need not be a member of the House and who shall advise the House on parliamentary matters, without voting privileges as Parliamentarian.

3.0203 Meetings

- 3.020301 Regular Meetings: The House of Delegates may meet on the day before the date set for the beginning of the general registration of the attendance at the Annual Convention. It may recess from time to time as may be necessary to complete its business, provided that its hours shall conflict as little as possible with the general or section meetings. It shall meet on the last day of the Annual Convention for the election of officers for the ensuing year and for the completion of any business previously introduced. The order of business shall be arranged as a separate section of the program. Nominations for officers of the Association may be made at any session of the House of Delegates.
- 3.020302 Special Meetings: Special meetings of the House of Delegates shall be called by the President upon a petition signed by thirty (30) delegates. The signed petition shall contain the names of at least ten (10) delegates from each of at least three (3) Trustee Districts. The President shall issue a call for same as described in 3.0404, second paragraph.
- 3.0204 House Admission: All sessions of the House of Delegates shall be open to all members in good standing of this Association for observation.
- 3.0205 Delegate Apportionment: Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members and one for each major fraction

thereof, but irrespective of the number of members, each component society which has made its annual report and paid its assessments, as provided in this Constitution and Bylaws, shall be entitled to one Delegate, except that where a component society is made up of physicians of more than one county each county shall be entitled to at least one Delegate and one Alternate Delegate who shall be a resident of the county represented as a Delegate and who shall be selected by the physicians residing in such county. The Student Delegate shall be seated with full power to vote. In the absence of the Student Delegate, the Alternate Student Delegate shall be seated with full power to vote.

- 3.020501 Method of Determination of the Number of Delegates: The number of Delegates to which each component society is entitled shall be based upon the number of members in good standing with dues fully paid as of December 31 of the preceding year.
- 3.020502 Section Delegates: All sections listed in 3.0303 of these Bylaws and which are in compliance with 3.0302 and 3.0306 of these Bylaws shall be entitled to send to the House of Delegates each year one Delegate or Alternate Delegate with all rights and privileges except the power to vote.
- 3.020503 Delegate Credentials: The names of duly elected Delegates and Alternates from each component society shall be sent to the Executive Director of this Association on or before February 1, prior to the Annual Convention at which such Delegates are to serve. No one shall be entitled to a seat in the House of Delegates unless a credential card as a Delegate or Alternate, properly signed by the Secretary of the appropriate county medical society or the Executive Secretary or Executive Director of the larger societies, is presented to the Committee on Credentials at the time of the Annual Convention.
- 3.0206 Quorum: Fifty (50) Delegates shall constitute a quorum.
- 3.0207 Authority and Responsibilities:
 - **3.020701** Resolutions and Proposals: The House of Delegates shall approve all memorials and resolutions issued in the name of the Association before same shall become effective.
 - 3.020701a Fiscal Note: Proposals calling for appropriation of funds by the House of Delegates shall be accompanied by a fiscal note and shall be submitted to the Executive Committee and the Board for review, presentation and recommendation for final action of the House. No proposal calling for appropriations shall be considered if not accompanied by a fiscal note.
 - 3.020701b Deadlines for Resolutions: Except as noted in 3.020701c and in 3.021102, all resolutions to be presented to the House of Delegates for action shall be prepared and mailed to the

Executive Director of the Association so that they will be received not later than 45 days prior to the session of the House of Delegates to which the resolutions will be presented for action.

3.020701c

Late Resolutions: Except for matters of extreme emergent nature, all late resolutions must be received by the Executive Director seven (7) days prior to the opening session of the House of Delegates. Those resolutions received after 45 days prior to the first session of the House of Delegates will be referred to the Committee on Rules and Order of Business. The Committee on Rules and Order of Business shall submit a report to the House concerning all items considered by same with recommendation(s) limited to the appropriateness of consideration of said resolutions.

The Committee on Rules and Order of Business will meet approximately 7 days prior to the Annual Convention to consider resolutions that have been first submitted to the Committee together with a written statement setting forth the reasons why the resolution was not mailed to the Executive Director more than 45 days prior to the first session of the House of Delegates and also setting forth in the written statement the reasons why the resolution is of such an emergency nature that it cannot wait until the next meeting of the House.

The report of the Committee on Rules and Order of Business shall be considered in the same manner as any other reference committee report. The House may accept or reject any recommendation of the Committee, which shall make recommendations on each resolution considered. Discussion on the floor will be limited to one speaker in dissension with the Committee's recommendation. This discussion will be limited to the appropriateness of consideration and not the merits of the resolution itself.

If the House in considering the report of the Committee on Rules and Order of Business, determines it is appropriate to consider said resolution for submission to the House and that each Delegate shall be furnished a copy then subsection 3.020701b of these Bylaws may be suspended upon a two-thirds vote of the House of Delegates.

3.0208 Election of Delegates to the American Medical Association:
The House of Delegates shall elect representatives to the
House of Delegates of the American Medical Association in accordance with the Constitution and Bylaws of that body.

Upon expiration of an AMA Delegate's or Alternate Delegate's term, election of a qualified member shall be accomplished to fill each specific vacancy thereby created. An AMA Delegate and Alternate Delegate may succeed himself in office or be elected to fill any other vacancy in the delegation.

In the event of a permanent vacancy occurring among the AMA Delegates, the remaining elected Delegates and Alternates to the AMA shall meet and nominate one of the Alternates to assume the vacancy until the next meeting of the Indiana State Medical Association House of Delegates, at which time the House will fill such vacancy. The nominated member proposed by the AMA delegation shall be subject to the confirmation of the Board of Trustees.

- 3.0209 Organizing Districts: The House of Delegates shall provide for the organization of such Trustee District Societies as will promote the best interests of the profession, such societies to be composed exclusively of members of component county societies. Trustee districts shall be defined by the House of Delegates. The House shall divide the state into Trustee Districts, specifying which counties each district shall include, and when the best interest of the Association and profession will be promoted thereby, organize in each district a medical society, and all members of component county societies, and no others, shall be members of such district societies.
- 3.0210 Authority to Appoint Special Committees: The House shall have the authority to appoint committees for special purposes from among members of the Association who need not be members of the House of Delegates. Such committees shall report to the House of Delegates, and the members of such committees may be present and participate on the floor in the debate of their reports.
- 3.0211 Reference Committees and Committee on Rules and Order of Business:
 - 3.021101 Reference Committees: Immediately after the organization of the House of Delegates at each Annual Convention, the Speaker shall announce the membership of the Reference Committees to serve during the convention for which they are appointed.

Appointments to these Reference Committees shall be made by the Speaker. The Chairman of each committee shall also be appointed by the Speaker. The Speaker shall also appoint such additional House committees as the House may approve. All committees hereunder shall serve only during the convention at which they are appointed. Appointments shall be made in time to be published in INDIANA MEDICINE and the Handbook prior to such Annual Convention. The Speaker shall have the power to appoint substitutes from among members present for absent appointees. Each committee shall consist of at least five ISMA members, three of whom including the chairman, shall be delegate-members of the House. To these committees shall be referred all reports, resolutions, measures and propositions presented to the House of Delegates, except matters as properly come before the Board, and the recommendations of these committees shall be submitted to the next session of the House of Delegates for acceptance in the original or modified form or for rejection.

3.021102 Responsibilities of Reference Committees: Four or more Reference Committees designated by numerals are hereby

constituted to which all matters shall be referred, at least one of which shall be organized for the sole purpose of studying the addresses of the President; President-Elect; report of the Executive Director; and Chairman of the Board of Trustees. This Committee shall be expected, as it deems appropriate, to translate recommendations made by these officers through resolutions for presentation to the House. Where a report, resolution, measure or proposition deals with more than one subject matter, reference thereof, may at the discretion of the Speaker of the House, be made (a) to as many Reference Committees as are necessary to cover all subjects included therein; or (b) to only one Reference Committee which the Speaker deems has within the scope of its reference the most important part of the matter referred. No report of any Reference Committee shall be rejected on the ground that it covers something not included in the matters which such Committee was created to consider.

- 3.021103 Time and Place of Meetings: The time and place of meetings of all Reference Committees shall be publicly posted, and all meetings of all Reference Committees shall be open only to members of this Association. Officers and chairmen of all commissions and committees whose reports are referred to Reference Committees are expected to appear and be heard before the respective committees to which such references are made in regard to their reports.
- 3.021104 Non-Member Attendance: Persons who are not members of the Indiana State Medical Association and seek to appear and present their technical or reference material to the Reference Committee must receive approval to appear on that specific subject from the Reference Committee Chairman. Such persons must register as guests at the committee and be at the call of the Reference Committee Chairman for testimony, after which they may be excused from further attendance.
- 3.021105 Committee on Rules and Order of Business: The Committee on Rules and Order of Business shall be composed of the Chairmen of the various Reference Committees appointed by the Speaker. This committee shall be charged with the duties as set forth in 3.020701c of these Bylaws.
- 3.0212 Election of Officers: The officers of this Association with the exception of the Executive Director and the Board of Trustees shall be elected by the House of Delegates, as the first order of business at the final session of the House of Delegates, and no person shall be elected to any such office who has not been an active member of the Association for the preceding two years. The officers except the Executive Director and the Trustees shall be elected annually. All officers shall serve until their successors are elected and installed.
 - 3.021201 Method of Election: All elections shall be by ballot and a majority of the votes cast shall be necessary to elect. In case no nominee receives a majority on the first ballot, the nominee receiving the lowest number of votes shall be dropped and a new ballot taken.

- 3.021202 Terms: The President, President-Elect, Speaker, Vice-Speaker, Treasurer and Assistant Treasurer shall serve from the termination of the annual meeting of the House of Delegates in which all but the President are elected until the termination of the succeeding annual meeting of the House of Delegates.
- 3.021203 Oath: The officers of the Association shall be installed by taking the following oath of office to be administered by the out-going President of the Association at the final session of the House of Delegates:

I, _____, solemnly swear that I shall carry out to the best of my ability, the duties of the office of the Indiana State Medical Association to which I have been elected.

I shall strive constantly to maintain the ethics of the medical profession and to promote the public health and welfare. I shall dedicate myself and my office to improving the health standards of the American people and to do the task of bringing increasingly improved medical care within the reach of every citizen.

I shall uphold the Constitution of the United States of America and of the state of Indiana, the Constitution and Bylaws of the Ameican Medical Association and the Constitution and Bylaws of the Indiana State Medical Association at all times.

I shall champion the cause of freedom in medical practice and freedom for all my fellow Americans. To these duties and obligations, I pledge myself, so help me God.

3.03 MEETINGS OF SPECIALTY SECTIONS

- 3.0301 Purpose: The purpose of Specialty Sections of ISMA is to provide a forum in ISMA and the House of Delegates, to have an active input into the scientific meeting, to introduce resolutions and have a voice on the floor of the House.
- 3.0302 Meetings: Each section will be required to have a minimum of one meeting annually. Minutes of the meeting will be required. A copy of the minutes and the names of the officers shall be forwarded to the Speaker of the House and will become a permanent record of the House.
- 3.0303 Official Sections: During the Annual Convention the Association, in addition to the general meetings, may hold the following section meetings:

3.030301 Allergy

3.030302 Anesthesia

3.030303 College Health Physicians

3.030304 Cutaneous Medicine

- 3.030305 Directors of Medical Education
- 3.030306 Emergency Medicine
- 3.030307 Family Physicians
- 3.030308 Internal Medicine
- 3.030309 Medical Directors and Staff Physicians of Nursing Facilities
- 3.030310 Neurological Surgery
- 3.030311 Neurology
- 3.030312 Nuclear Medicine
- 3.030313 Obstetrics and Gynecology
- 3.030314 Ophthalmology
- 3.030315 Orthopedic Surgery
- 3.030316 Otolaryngology, Head and Neck Surgery
- 3.030317 Pathology and Forensic Medicine
- 3.030318 Pediatrics
- 3.030319 Preventive Medicine and Public Health
- 3.030320 Psychiatry
- 3.030321 Radiology
- 3.030322 Surgery
- 3.030323 Urology
- 3.0304 Formation of Sections: Any future section can only be formed by a properly constituted resolution and shall include the signatures of a minimum of 15 members or 25% of the members, whichever is greater, who are practicing that specialty in the state of Indiana. The resolution shall be subject to the decision of the House of Delegates.
- 3.0305 Officers: The officers of each section shall be a Chairman, a Vice-Chairman, and a Secretary, and they shall preside over the meetings of the section and shall be responsible to the Commission on Convention Arrangements for the section speakers and papers.
- 3.0306 Officer Elections: The election of officers shall be held at a meeting of the section annually. The names of the officers shall be forwarded to the Speaker, and will become a permanent record of the House.
- 3.0307 Restriction on Meetings: No section meeting shall be allowed to conflict with a general meeting.
- 3.0308 Failure to Comply: Any section not complying with the preceding shall not have a delegate in the House.

3.04 MEETINGS FOR THE GENERAL MEMBERSHIP

3.0401 General Meetings for the Membership: General Meetings shall mean all meetings planned for attendance by all registered members and shall include those meetings in which guests of registered members or the general public are also invited. The address of the President may be delivered in a General Meeting, and the programs of General Meetings shall be arranged by the Executive Committee except where scientific papers are included, in which event the scientific part of the program shall be arranged by the Commission on Convention Arrangements, with the sanction and approval of the officers.

- 3.0402 Purposes of Meetings for the General Membership: Meetings of the Association:
 - 3.040201 Scientific Presentations and Discussions. (Quorum NOT necessary)
 - 3.040202 Dissemination of Information of Interest to the General Membership. (Quorum NOT necessary)
 - 3.040203 Appointment of Committees: The General or Section Meetings may recommend to the House of Delegates the appointment of committees or commissions for scientific investigation of special interest and importance to the profession and public. (Quorum NOT necessary)
 - 3.040204 Issue Mandates to the House: Matters of vital concern to the general membership may be referred to the House of Delegates who shall act as expeditiously as possible utilizing the usual parliamentary procedures in order to serve the needs of the profession in the most equitable fashion. (QUORUM NECESSARY)
 - 3.040205 Order Referendums: As described in 9.01 (QUORUM NECESSARY)
- 3.0403 Quorum for General Membership Meetings: For the purpose of transacting official business, a quorum of 150 members must be present at a General Meeting of the Association.
- 3.0404 Special Meetings for the General Membership: Special Meetings for the general membership shall be called by the President upon receipt of a petition signed by one hundred (100) members representing a minimum of three (3) Trustee districts, with no one district providing more than thirty-four (34) of the required one hundred (100) signatures. Upon receipt by the President of such a petition, the President shall within thirty (30) days thereafter issue a call for such special meeting, and shall state the items of business to be considered, at a time and place fixed by the President. The President, in specifying the time of such special meeting, shall fix the same as soon thereafter as reasonable and suitable arrangements can be made.

4.00 OFFICERS

- 4.01 COMPOSITION: The officers of this Association shall be a President, a President-Elect, the Immediate Past President, an Executive Director, a Treasurer, an Assistant Treasurer, a Speaker, a Vice-Speaker, each of whom shall be a member, except the Executive Director, who need not necessarily be either a physician or a member.
 - 4.0101 Limitation: The offices of President, President-Elect, the Immediate Past President, Treasurer, Assistant Treasurer, Speaker, Vice Speaker, as well as AMA Delegates, AMA Alternate Delegates, and ISMA Trustees and ISMA Alternate Trustees are major offices. Individuals may not hold more than one major office during a given term and must resign from a major office if they attain a second.

- 4.0102 Delinquent Dues: A major office holder in ISMA who is delinquent in paying dues will not be allowed to vote in that capacity until annual dues are paid in full.
- 4.02 REMOVAL, DEATH, RESIGNATION, VACANCY: Any officer may be removed from office after a hearing before the Board on thirty days notice, on charges in writing, upon a vote of three-fourths of the members of the Board.

In the event of the death, resignation, removal or permanent disability of any officer of this Association whose successor is not otherwise provided for in these Bylaws, the vacancy shall be filled by the Board of Trustees until the next official meeting of the House.

The Board shall fill a vacancy in the office of Treasurer or Assistant Treasurer by an election by the Trustees at the next regular meeting of the Board following the occurrence of such vacancy.

4.03 DUTIES

4.0301 President: The President or a member designated by the President shall preside at all general meetings of the Association. The President shall appoint all committees not otherwise provided for; shall appoint the chairman of each commission and committee; shall fill the vacancies resulting from the expiration of terms of members of commissions, and also appoint members to fill the unexpired term where any other vacancy occurs. The President will have the power, with the approval of the Board, to remove any member of any committee or commission as defined in 7.05. Within 60 days after the Annual Convention, the President may call all commissions and committees into a joint meeting as defined in 7.08.

Charters of county societies as defined in 11.01, and component societies, as defined in 12.01, and approved by the Board, shall be signed by the President and Executive Director.

Special meetings of either the Association or the House of Delegates shall be called by the President as defined in 3.020302 and 3.0404 of these Bylaws.

The President shall deliver an annual address at such time as may be arranged by the Executive Committee, and shall perform such other duties as custom and parliamentary usage may require. The President shall be the real head of the profession of the state during the term of office, and as far as practicable, shall visit by appointment the various sections of the state and assist the trustees in building up the county societies and in making their work more practical and useful.

Ex-officio, the President shall be a member, without vote, of all commissions, committees and the Board of Trustees.

4.0302 President-Elect: The President-Elect's term of office shall be for one year, at the completion of which the President-Elect succeeds to the presidency. The President-Elect shall assist the

President in the discharge of duties. Ex-Officio, the President-Elect shall be a member, without vote, of all commissions and committees.

In the event the office of President is vacant, the President-Elect will assume the office of President.

- 4.0303 Treasurer: The Treasurer shall give bond at the expense of the Association in such an amount as shall be required by the Board unless included in the coverage of a blanket or position bond. The Treasurer shall receive all bequests and donations to the Association and shall demand and receive all funds due the Association in the conduct of its business. The funds of the Association shall be deposited in a depository or depositories designated by the Executive Committee, and withdrawals from such funds shall be made on checks or drafts signed by the Treasurer, the Assistant Executive Director, and/or other officers of the Association as the Executive Committee may designate. The Treasurer shall present to the House of Delegates annually a report of the receipts and expenditures, and the state of funds on hand.
- 4.0304 Assistant Treasurer: The Assistant Treasurer shall give bond at the expense of the Association in such amount as shall be required by the Board unless included in the coverage of a blanket or position bond. In case of death, or incapacity of the Treasurer, the Assistant Treasurer shall succeed to all the duties and rights of the Treasurer until a new Treasurer is elected. In the absence of the Treasurer, the Assistant Treasurer shall attend to the duties and rights of the Treasurer during such absence and shall also perform such duties of the Treasurer as may be delegated and assigned by the Treasurer.
- 4.0305 Executive Director: The Executive Director shall be the directing manager of the Association's headquarters and INDIANA MEDICINE offices, and shall supervise the work of all salaried employees of the Association offices. Such supervision shall be subject to directives from the House of Delegates, the Board, the Executive Committee, and the President of the Association. The Executive Director shall discharge the administrative functions of the Association not within the duties of other offices or of committees to perform. The Executive Director shall assist, at their request, all offices and committees, and shall keep informed in regard to nonprofessional matters affecting the medical profession, for the purpose of keeping qualified to perform the services herein mentioned. The Executive Director shall be responsible for the execution and carrying out of the policies of the Association and in that connection shall perform all specific tasks required by the committees, the Board and the officers of this Association.

A major office holder whose dues are delinquent will be personally notified of this delinquency by the Executive Director of ISMA. The amount of the Executive Director's salary shall be fixed by the Executive Committee on approval of the Board.

4.0306 Speaker: The Speaker shall be elected annually from the membership of the House. The Speaker shall preside at all meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require. The Speaker shall have the right to vote as a delegate member of the House.

The Speaker may address the House of Delegates at the opening session of all conventions, limiting the address to matters of conduct and procedure of the House.

The Speaker shall be further charged with the duties as defined in these Bylaws. (e.g., 3.0202, 3.021101, 3.021102 and 3.0302) Ex-officio, the Speaker shall be a member of all commissions and committees and the Board of Trustees of this Association without the power to vote. Training in parliamentary procedure shall be mandatory for the Speaker and shall be provided at the expense of the Association. In the event the offices of President and President-Elect are vacant, the Speaker of the House of Delegates will assume the office pro tem until the next called or regularly scheduled meeting of the House when a President and a President-Elect will be elected.

- 4.0307 Vice Speaker: The Vice Speaker shall be elected annually from the membership of the House. The Vice Speaker of the House of Delegates shall officiate at meetings in the absence of the Speaker or at the request of the Speaker. The Vice Speaker shall have the right to vote as a delegate member of the House. Exofficio, the Vice Speaker shall be a member of all commissions and committees and the Board of Trustees of this Association without the power to vote. Training in parliamentary procedure shall be mandatory for the Vice Speaker and shall be provided at the expense of the Association.
- 4.04 EXPENSES: The necessary expenses of the above offices incurred in the line of duty herein imposed shall be allowed for in the budget but, excepting the Executive Director, this shall not include the expenses of attending the Annual Convention.
- 5.00 BOARD OF TRUSTEES
 (Referred to elsewhere in these Bylaws as Board)
 - 5.01 COMPOSITION/VOTING POWER: The Board of Trustees shall consist of:
 1) The Trustees with power to vote and their duly elected Alternates,
 each of the latter without power to vote except when the Trustee is not
 in attendance; and 2) ex-officio, the President, President-Elect,
 Treasurer, Immediate Past President with power to vote, Assistant
 Treasurer without power to vote except in case the Treasurer is not in
 attendance, and the Speaker, Vice Speaker, and Executive Director
 without power to vote.
 - 5.02 AUTHORITY: The Board shall be the executive body of the Association with full power to transact any business that emergencies or the welfare of the Association may require, and perform and exercise all of the rights and duties as specified in this section.
 - 5.0201 The Board will declare major office holders who are delinquent in paying their dues as suspended from the office after February 1,

at which time such officers shall sacrifice all rights and privileges of the office until said dues are received in full by ISMA.

5.03 ELECTION: Trustee and Alternate. The Trustees shall be elected by the respective district societies. If any district fails to meet and elect its Trustee(s) or Alternate Trustee(s) by the time of the expiration of the incumbent's term of office, the Executive Director of the Association shall cause a special meeting to be called by said district society for the purpose of such election.

5.04 MEETINGS AND TERM:

- Shall meet at least once each quarter of the calendar year, the time, date and location to be fixed by the Board. 2) On the day preceding the first day of the scientific meetings of the Annual Convention of the Association. 3) On the last day of the Annual Convention of the Association after the adjournment of the House of Delegates. 4) At such other times as necessity may require, subject to the call of the Chairman. It shall hold no meeting that will conflict with any meeting of the House of Delegates. Notice of each regular meeting shall be given at least ten days before such meeting.
- 5.0402 Special Meetings: Special meetings may be called at any time by the Chairman or at the request of seven members of the Board.

 Notice shall be given at least five days before each special meeting. The notice shall specify the general purpose of and business to be transacted at the meeting.
- 5.0403 Quorum: Twelve members of the Board shall constitute a quorum.
- 5.0404 Attendance at Meetings: If any elected Trustee fails, without reason acceptable to the Board, in any calendar year to attend a majority of the meetings of the Board, said person shall thereby cease to be a Trustee, and the Executive Director shall take action in accordance with 5.05.
- 5.0405 Meeting Notices: Notice is given if delivered in person, by telephone, mail or telegram. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail, addressed to a Trustee (and other persons entitled to notice) at the Trustee's address then appearing on the records of the Association, with postage prepaid, and if given by telegraph, shall be deemed delivered when the telegram is delivered to the telegraph company.

Notice of any meeting and the object of business to be transacted at a meeting of the Board need not be given if waived in writing, or by telegraph, mail, or telephone before, during, or after such meeting. Attendance at any meeting shall constitute a waiver of notice of such meeting except where attendance is for the express purpose of objecting to the transacting of any business because the meeting is lawfully called or convened.

5.0406 Terms of Trustees: Terms of Trustees shall begin with the first meeting of the Board following the final session of the House of Delegates at the Annual Convention.

The term of the elected Trustees shall be for three years and approximately one third of the number shall be elected annually. No Trustee shall be eligible to serve longer than two terms consecutively.

The time given to serving an unexpired term shall not be considered in determining the period within which a Trustee may serve consecutively.

- Alternate Trustees: Each Trustee district shall elect an Alternate Trustee whose term of office shall be for three years. The Alternate Trustee shall be elected in a year during which the Trustee is not elected. No Alternate Trustee shall be eligible to serve longer than two terms consecutively. The time given to serving an unexpired term shall not be considered in determining the period within which an Alternate Trustee may serve consecutively.
- 5.05 VACANCIES: In the event of a vacancy occurring from any cause, except expiration of the term of office, in the office of a District Trustee, the duly elected Alternate Trustee from the same district shall succeed to the office of the Trustee in that District for the unexpired term of said Trustee. In the event the Alternate Trustee succeeds the Trustee for any cause, with the exception of expiration of term of office, the President of the District Medical Society shall assume the office of Alternate Trustee until such time as a new Trustee is elected. In the event vacancies occur in any Trustee District in the offices of both Trustee and Alternate Trustee, the vacancies shall be filled by an election by the members of the Association within the Trustee District in which the vacancies occur. A call for such elections shall be issued by the Executive Director of the Indiana State Medical Association following a conference(s) with the officers of the District organization. The call shall state the time and place of holding the election and shall be sent registered mail to the County Secretary, as filed in the Indiana State Medical Association Executive Director's office, of each component society within the District. Such call shall be mailed within ten days after the Executive Director of ISMA has learned of the vacancies. The election may be held at a regular meeting at which business other than the election may be transacted. Such election shall be within fifteen days after the Executive Director of the Indiana State Medical Association shall have mailed such call.
- 5.06 ORGANIZATION AND DUTIES: Immediately following the conclusion of the Annual Convention, the Board shall organize by electing a Chairman, who shall serve for one year; and a Clerk who, in the absence of the Executive Director of the Association, shall keep a record of its proceedings and who in the absence of the Chairman will act as Chairman Pro-Tem. It shall, through its Chairman, make an annual report to the House of Delegates. The Chairman of the Board shall be elected by secret ballot. The number of terms of the Chairman shall be limited to not more than three in succession. The chairman of the Board of Trustees shall be an ex-officio member, without vote, of all ISMA commissions and committees.
 - 5.0601 Election of At-Large Members to Executive Committee: The Board shall, at its meeting following the close of the House of

Delegates, elect two members of the Board as at large members who, with the President, the President-Elect, the Immediate Past President, the Chairman of the Board, the Treasurer, the Assistant Treasurer, with the power to vote in the absence of the Treasurer, and ex-officio the Speaker and Vice Speaker without power to vote shall constitute and be known as the Executive Committee. Members of the Committee shall serve until the next organizational meeting of the Board and until their successors are elected and qualified.

The Executive Committee shall have the power and duties as may be defined from time to time by action of the Board of Trustees.

5.0602 Conduction of Business: The Board shall perform all acts and transact all business for or on behalf of the Association and manage the property and conduct the affairs, work and activities of the Association, except as may be otherwise provided in the Constitution or the Bylaws. All resolutions and recommendations of the House calling for the expenditure of funds passed by the House of Delegates shall be referred to the Executive Committee, which shall determine whether the expenditures are advisable and so inform the Board of Trustees. If the Board of Trustees decides that the expenditure(s) is inadvisable, the Board shall report, at its earliest convenience, to the House of Delegates the reasons for its action.

In no instance may the Executive Committee or the Board of Trustees fail to implement a mandate of the House of Delegates for reasons other than fiscal impossibility, budgetary restrictions or legal ramifications.

- 5.0603 INDIANA MEDICINE and Other Publications: The Board shall provide for the publication of and determine the editorial policies, in accordance with the policy enunciated by the House of Delegates, of 1) INDIANA MEDICINE, 2) publications as it may deem expedient, 3) a publication for public information and dissemination and 4) all proceedings, transactions and memoirs. The Board shall provide for and superintend all publications of the Association, and shall appoint an editor and an editorial board, as it deems necessary, and fix the amount of their salaries. The proceedings of the Board for the year shall be reported to the House of Delegates at the Annual Convention and be published in the number of INDIANA MEDICINE which immediately precedes the Annual Convention. The Board shall appoint an editor or editors for all the Association's publications.
- 5.0604 Employ Executive: The Board shall employ the Executive Director, and fill any vacancy therein, who shall be the person to manage and direct the activities of the Association under the authority granted by the Board.
- **5.0605** Financial Reports: The Board shall have the accounts of the Association audited at least annually.
- **5.0606** County Visitation, Expenses and Reports: Each Trustee shall be organizer, peacemaker, and censor for the represented district.

The Trustee shall visit the counties in the represented district at least once a year for the purpose of organizing component societies where none exist; for inquiring into the condition of the profession, and for improving and increasing the zeal of the county societies and their members. The Trustee shall make an annual report of official work and of the condition of the profession of each county in the represented district, the same to be published in the number of INDIANA MEDICINE which is issued immediately preceding the Annual Convention. The House of Delegates may take such action, if any, as it deems appropriate upon such reports. The necessary expenses incurred by such Trustee in the line of the duties herein imposed may be allowed by the Board on a properly itemized statement, but this shall not be construed to include the Trustee's expense in attending the Annual Convention of the Association.

- 5.0607 Organizing County Societies: The Board shall make careful inquiry into the condition of the profession of each county in the state and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interest in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly relations among physicians of the same locality and shall continue these efforts until every physician in every county of the state who can be made reputable has been brought under medical society influence. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies to be designated by hyphenating the names of two or more counties so as to distinguish them from district and other classes of societies; and these societies, when organized and chartered, shall be entitled to all the privileges and representation provided herein for county societies, until such counties may be organized separately.
- 5.0608 Scientific Work: The Board shall, through its officers and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall study and strive constantly to make each Annual Convention a stepping stone to future ones of higher interest. The Board shall encourage postgraduate and research work, as well as home study, and shall endeavor to have the results utilized and intelligently discussed in the county societies.
- 5.0609 Interest of the Profession: The Board shall, in connection with the House of Delegates, consider and advise as to the interests of the profession and of the public in those important matters wherein it is dependent upon the profession, and shall use its influence to secure and enforce all proper medical and public health legislation and to diffuse popular information in relation thereto.
- 5.0610 Charters: The Board shall, upon application, provide and issue charters to county societies organized to conform to the spirit of this Constitution and Bylaws. The Board shall also provide and issue charters to component societies. Charters are defined in 11.01 and 12.01.

5.0611 Board of Censors: The Board shall be the Board of Censors of the Association. It shall consider all questions involving the rights and standings of members whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the General or Section meetings shall be referred to the Board without discussion.

It shall hear and decide all questions of discipline affecting the conduct of members of component societies on which an appeal is taken from the decision of an individual Trustee, and its decision in all such matters shall be final.

5.0612 Duties of Alternate Trustee: The duties of the Alternate Trustee shall be: 1) To represent the Trustee District when the regularly elected Trustee is not in attendance. 2) To vote only when the Trustee is not in attendance either in the House of Delegates or in the Board meetings.

6.00 THE EXECUTIVE COMMITTEE

- 6.01 COMPOSITION: The Executive Committee, consisting of seven (7) voting members, constituted as provided in 5.0601 of these Bylaws, shall hold its first meeting immediately following the meeting of the Board held at the close of the last session of the House of Delegates at the Annual Convention, and shall organize by electing its Chairman. If the Executive Committee is unable to select a chairman within thirty (30) days after the final session of the House of Delegates, then a meeting of the Board of Trustees shall be called and a Chairman of the Executive Committee shall be selected by the Board of Trustees. Its Secretary shall be the Executive Director of the Association. It shall meet with the Executive Director on the call of the Chairman, or of any three members, to plan and execute such work as may be necessary for the welfare of the Association and the conduct of the Executive Director's office and such other duties as the Board may specify. It shall have all jurisdiction with respect to medical defense activities of the Association, and shall be governed by the rules it adopts concerning that activity and by the Bylaws of this Association. It shall make decisions for the Association, including matters pertaining to INDIANA MEDICINE during the intervals between the meetings of the Board, and shall report its actions to the Board.
- **6.02 QUORUM:** Four (4) voting members of the Executive Committee shall constitute a quorum.
- 6.03 BUDGET RESPONSIBILITY: It shall prepare a budget for the ensuing fiscal year; and all expenditures of the Association, except those otherwise provided for under the Constitution and Bylaws, shall be governed by the budget. No expense not provided for in the budget or otherwise under the Constitution and Bylaws shall be incurred by any officer, commission or committee. A committee, commission or officer may submit a request for funds to meet unusual expenses not included in the annual budget, and the Executive Committee shall have the power, by a two-thirds vote, to amend the budget to provide such fund.

All resolutions and recommendations of the House of Delegates calling for the expenditure of funds passed by the House of Delegates shall be referred to the Executive Committee.

- 6.04 INVESTMENT SURPLUS FUNDS: The investment of all surplus funds of this Association shall be under the direct control and management of the Executive Committee subject to instructions in regard thereto which may be given by the Board at its option. The Executive Committee shall have the right and is encouraged to obtain advice and counsel of recognized financial experts in regard to the discharge of the duties covered by this section of the Bylaws.
- 6.05 STUDENT LOAN: The Executive Committee shall have the authority to make loans to medical students in accordance with the terms and conditions under which funds are made available for that purpose. Rules and regulations adopted shall be subject to the approval of the Board. The Executive Director shall have the duty and responsibility of keeping minutes of all transactions and shall file a copy of such minutes, as well as a copy of all papers pertaining to any applications or loans, in the Headquarters Office of the Association.
- 6.06 VACANCY: A vacancy on the Executive Committee shall be filled by an election by the Trustees at the next regular meeting of the Board following the occurrence of such vacancy.

7.00 ORGANIZATION OF ACTIVITIES AND RESPONSIBILITIES

7.01 CREATION OF COMMITTEES AND COMMISSIONS: The organization of the Association, the performance of which is not provided elsewhere in the Constitution and Bylaws, and is not carried on in the meetings of the Board or of the House of Delegates, or by special committees created by the Executive Committee, the Board or the House of Delegates, may be performed by the following committees and commissions:

7.0101 The Committees are as follows:

7.010101 The Future Planning Committee

7.010102 The Grievance Committee

7.010103 The Indiana Medical Education Fund Committee

7.010104 The Medico-Legal Committee

7.010105 The Negotiations Committee

7.010106 The Reduce Drunk Driving Committee

7.0102 The Commissions are as follows:

7.010201 COMMISSION ON CONSTITUTION AND BYLAWS

7.010202 COMMISSION ON CONVENTION ARRANGEMENTS
This commission encompasses the field of:
Specialty Medicine

7.010203 COMMISSION ON LEGISLATION This Commission encompasses the fields of: State Legislation Federal Legislation

State Regulations Federal Regulations 7.010204 COMMISSION ON MEDICAL EDUCATION
This Commission encompasses the fields of:
Accreditation
Education Program

7.010205 COMMISSION ON MEDICAL SERVICES
This Commission encompasses the fields of:
Aging
Emergency Medical Services
Governmental Medical Service Programs
Medical Economics and Insurance
Public Health
Voluntary Health Agencies

7.010206 COMMISSION ON PHYSICIAN IMPAIRMENT
This Commission encompasses the fields of:
Alcoholism
Drug Abuse
Neuropsychiatric Illness
Physical Infirmity

7.010207 COMMISSION ON PUBLIC RELATIONS
This Commission encompasses the fields of:
Interprofessional Relations
Public Information
Special Activities

7.010208 COMMISSION ON SPORTS MEDICINE
This Commission encompasses the field of:
Sports Medicine

- 7.02 COMMITTEE STRUCTURE: Except as otherwise stated in the Bylaws, a committee shall consist of not less than 4 nor more than 5 members, appointed from the general membership of the Association and shall be appointed annually by the President. The President shall also appoint the Chairman of each committee. The Committee Chairman shall appoint a Vice Chairman.
- 7.03 COMMISSION STRUCTURE: The President may appoint one commission member of each 600 regular members of a trustee medical district or a major fraction thereof, but in any event, each district shall have one member on each commission.

The original appointees in each commission shall be divided into three groups by lot. The first group shall serve three years; the second, two years; and the third, one year. Thereafter, each incoming President shall appoint members of each commission to fill the vacancies resulting from the expiration of the terms of members, and such appointments shall be for three years. The President shall also appoint members to fill the unexpired term where any vacancy occurs through death, resignation or otherwise. The President may appoint a maximum of three At-Large members for a term of one year, with the right to vote, to each commission. The President shall appoint the Chairman of each commission. The Commission Chairman shall appoint a Vice Chairman.

7.04 EX-OFFICIO MEMBERS: The President, President-Elect, Executive Director, Speaker, Vice-Speaker of the House and the Chairman of the Board of

Trustees shall be ex-officio members of all committees and commissions without voting rights where their inclusion on the committee or commission is not otherwise provided for in these Bylaws.

- 7.0401 Past Presidents: The three (3) most recent past presidents are ex-officio non-voting members of the Commission on Legislation.
- 7.05 REMOVAL OF MEMBERS: The President shall have the power, with the approval of the Board, to remove any member of any committee or commission where such member, for any reason, does not or cannot work at attempting to perform the duties pertaining to membership on such committee or commission.
- 7.06 QUORUM: Unless otherwise specified one-third (1/3) of the voting membership of a committee or commission shall constitute a quorum.
- 7.07 TERMS: Unless otherwise provided in the Bylaws, no member of a commission shall serve on the same commission more than two consecutive terms, but this shall not prevent the member from serving more than two terms if the term of another member intervenes. The time given to the serving of an unexpired term shall not be considered in determining the period within which a member may serve consecutively.
- 7.08 INITIAL MEETING: Within sixty days after the meeting of the Annual Convention, the President may call all commissions and committees into a joint meeting in order to give a statement of the duties and responsibilities of all committees and commissions, call special attention to any immediate problems confronting the Association, and assign such problems or parts thereof to appropriate committees and commissions. In these meetings, the commissions may provide for such subcommissions within the separate commissions as they may deem advisable. Each committee or commission shall have the right to call upon other committees, commissions or members of the profession for counsel and advice with respect to its work.
- 7.09 COORDINATION OF ACTIVITIES: Each committee and commission shall have the privilege and is encouraged to have joint meetings with any like committee or commission of the Auxiliary where such like committee or commission exists, for the purpose of coordinating activities to make them more effective in the medical service of the public and the intent of the Association.
- 7.10 DUTIES AND RESPONSIBILITIES: Each committee and commission shall have the duty and responsibility of keeping constantly and currently informed on the matters within the area of its special interest and activity of studying the conditions within that area with the purpose of finding possibilities for improvement; of finding the best solutions it can to the specific problems referred to it; of contributing in its area to the achievements of the Association as a whole in the protection and improvement of the health of the whole human family and finally of making all its efforts useful by passing on to the Association in the most effective manner possible the results of its studies and activities in its own area of special interest.
 - 7.1001 The Future Planning Committee: The function of this committee shall be to study and anticipate future trends and to stimulate the various

commissions in coordinated directions so there is a concord to the entire operation of Indiana State Medical Association. It is not contemplated that it be an operational committee.

- 7.1002 The Grievance Committee: The duties of this committee shall be to receive complaints, appeals or suggestions from physicians or lay persons concerning professional conduct. It shall attempt to find the facts regarding any matter brought to its attention, through procedures proper and appropriate to that end, and shall attempt to adjust differences between patients and physicians. It may, if it believes the facts justify such, cite a member of the Indiana State Medical Association to the Board of the Indiana State Medical Association. It shall, subject to the approval of the Board, draw up a set of rules and regulations governing its procedure and official action.
- 7.1003 The Indiana Medical Education Fund Committee: The purpose of this committee shall be to promote, develop and improve medical education in the Indiana University School of Medicine for the general benefit of the entire public by obtaining and using funds from private sources to accomplish that result. The funds collected will be deposited in a trust and at periodic intervals the committee shall make a distribution from the trust to be used by the Indiana University School of Medicine. The Indiana Medical Education Fund Committee shall consist of eight persons, five of whom shall be from the Indiana State Medical Association, appointed by the President thereof, all of whom shall be voting members. There shall be three additional members of the committee who shall be ex-officio and non-voting and they shall be the Dean of the Indiana University School of Medicine, or the Dean's designee, the President of the Indiana State Medical Association, and the Executive Director of the Association who shall also act as Secretary of the Committee. actions of this committee shall be certified to the Executive Committee. Each year a report of the Committee's activities. including a financial accounting report of the fund itself as administered by the trustee, shall be made part of the Executive Committee's annual report to the House of Delegates. The five members shall serve staggered terms to insure continuity. Two members shall be appointed to serve three year terms, two shall serve two year terms, and one shall serve a one year term.
- 7.1004 The Medico-Legal Review Committee: The Medico-Legal Review Committee shall consist of three members selected from the Indiana State Medical Association whose duty it shall be to meet in joint session and work with a similar committee of three members of the Indiana State Bar Association to be appointed by the Indiana State Bar Association. These three members of the Indiana State Medical Association shall function as the medical representatives provided for in the Joint Inter-Professional Code of the Indiana State Medical Association and the Indiana State Bar Association to carry out the purposes of that code. Its duties shall be as stated in that Code in the form in effect from time to time as approved by the Association, and in all other medico-legal matters.
- **7.1005** Negotiations Committee: The Negotiations Committee shall consist of five physician members appointed for terms of four years each. The

initial nomination shall be staggered to insure continuity. Two members shall be appointed to four year terms. One member shall be appointed to a three year term and one member shall be appointed to a two year term and one member shall be appointed to a one year term. The purpose of the Negotiations Committee is to become involved in proposals which affect the practice of medicine that include, but not limited to, negotiating with third parties and various government agencies at specific direction from the Board of Trustees.

- 7.1006 Reduce Drunk Driving Committee:
- 7.1007 The Commission on Constitution and Bylaws: The Commission on Constitution and Bylaws shall keep in contact with the developments and changes in procedures in carrying on the work of this Association; shall suggest revisions necessary to keep the Constitution and Bylaws always in accord with the practices and procedures best adapted to the functioning of the Association; and shall keep the practices and procedures of the Association consistent with the provisions from time to time contained in the Constitution and Bylaws - to the end that all members of the profession, by reference to the Constitution and Bylaws, may be able to obtain accurate information regarding procedure and practice within the Association, and that hampering of such procedure and practice by obsolete provisions in the Constitution and Bylaws be avoided. Amendments which are passed by the majority of the House become effective immediately and shall be submitted to the Commission on Consitution and Bylaws for implementation.
- 7.1008 The Commission on Convention Arrangements: The Commission on Convention Arrangements, with the advice and assistance of the Executive Director, shall provide suitable accommodations for meetings of the Association, including the House of Delegates, Board, and of their respective committees, the scientific and technical exhibits, and in conjunction with the Executive Director, shall have general charge of all the arrangements. Its Chairman shall report an outline of the arrangements to the Executive Director of the Association for publication in INDIANA MEDICINE and in the official program, and shall make additional announcements during the session as occasion may require. The arrangements and the character of any and all technical exhibits must meet with the approval of the Executive Committee of the Association. It shall, with the approval of the Executive Committee, prepare a program for scientific work for the Annual Convention in which shall be included the respective programs for section meetings which shall be prepared through cooperation with the officers of the various sections, and it shall, with the approval of the Executive Committee, arrange for scientific exhibits as a part of the Annual Convention.

The general, scientific and sectional programs, and the financial arrangements to provide for them must be approved by the Executive Committee before being officially announced.

7.1009 The Commission on Legislation: The Commission on Legislation shall study all legislation, regulations and regulatory proposals, both state and national, and all local legislative and regulatory trends

and movements, as to their effect upon the practice of medicine and the protection of the public health; shall keep the profession informed at all times concerning the matters within its area of responsibility; shall conduct investigations of legislative and regulatory proposals; and shall maintain liaison with members of the State Legislature and the United States Congress, state regulatory agencies whose scope and charge may affect the practice of medicine and the public health and welfare and with the legislative and regulatory activities of the American Medical Association. It shall strive to implement and make effective the legislative and regulatory proposals adopted by the Association but shall not abrogate its responsibility within the scope of this charge for want of a specific mandate from the House.

- 7.1010 The Commission on Medical Education: The Commission on Medical Education shall maintain liaison with, and be of assistance to medical schools and the medical licensing board. It shall keep in contact with, and endeavor to assist in improving and maintaining high quality undergraduate, graduate and continuing medical education and public school health education within the state. The Commission on Medical Education with the assistance of the Subcommission on Accreditation shall serve as the Indiana State Medical Association state's accrediting body to accredit institutions and organizations for the presentation of intrastate continuing medical education programs.
- 7.1011 The Commission on Medical Services: The Commission on Medical Services shall concern itself and assume special responsibility in obtaining information and giving counsel and advice to the Association with respect to all matters in which medical service comes into contact with any existing or proposed functions of government, including civil defense, rehabilitation of persons handicapped by abnormality or disease, medical service in welfare departments, maternal and child health programs sponsored through governmental agencies, medical care of military personnel, plans and programs for medical care of veterans, medical care for dependents of those in uniformed services of the government, plans and programs of the government for medical care now existing or which may hereafter be adopted by any special group, government programs for elimination of venereal disease and other communicable diseases, and all programs and plans for medical care to be provided through municipal, state or federal governments.
- 7.1012 The Commission on Physician Impairment: The Commission on Physician Impairment shall develop a program to recognize, treat and rehabilitate physicians who are impaired by neuropsychiatric illness, physical infirmities or alcohol and other substance dependence. The Commission will encourage informal and formal referral of all impaired physicians through county medical society screening committees.
- 7.1013 The Commission on Public Relations: The Commission on Public Relations shall collect and organize for dissemination to the public all matters of public interest within the field of medicine, including the activities of other commissions in which the public interest would be involved, and including also the achievements in the advancement of medicine which would be of interest to the

public; shall disseminate all such information through the use of whatever media the commission may find adaptable to that purpose so that such information may be brought to the public in the most effective and convincing manner; and shall develop and maintain the relations of the medical profession with the public in such a way as to give the lay public a better knowledge and understanding of the aims, objectives and value of the profession.

7.1014 The Commission on Sports Medicine:

7.11 TRAVEL REIMBURSEMENT: ISMA will reimburse commission and committee members at the rate currently allowed by the IRS for mileage driven to attend ISMA commission and committee meetings. This does not include any expense of attending same during the annual convention.

8.00 RECIPROCITY OF MEMBERSHIP WITH OTHER STATE SOCIETIES

In order to broaden professional fellowship, this Association is ready to arrange with other State Medical Associations for an interchange of certificates of membership so that members moving from one state to another may avoid the formalilty of re-election.

9.00 REFERENDUM

- 9.01 GENERAL AND SPECIAL MEETINGS: Providing a quorum is present, (150 members) as per 3.0403 of these Bylaws, a general or special meeting of the Association may, by a two-thirds vote of the members present, order a general referendum on any question pending before the House of Delegates, and when so ordered the House of Delegates shall submit such question to the members of the Association, who may by mail or in person, and if the members voting shall comprise a majority of all members of the Association, a majority vote shall determine the questions and be binding on the House of Delegates.
- 9.02 GENERAL REFERENDUM: The House of Delegates may, by a two-thirds vote of its own members, submit any question before it to a general referendum, as provided in the preceding paragraph, and the result shall be binding on the House of Delegates.

10.00 THE SEAL

The Association shall have a common Seal, with power to break, change or renew that same at pleasure.

11.00 COUNTY SOCIETIES

11.01 CHARTERS: All county societies now in affiliation with this Association or those which may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and Bylaws, or those of the American Medical Association, shall on application receive a charter from and become a component part of this Association. The acceptance or retention of this charter shall be regarded as a pledge on the part of said component society to conduct itself in harmony with the letter and spirit of this Constitution and Bylaws and other rules and resolutions of this Association. Charters shall be issued only upon approval of the Board and shall be signed by

the President and Executive Director of this Association. The Board shall have the authority to revoke the charter of any component society whose actions are in conflict with the letter and spirit of this Constitution and Bylaws or those of the AMA.

- 11.0101 Conflicting Societies: With the exception of the component Student Medical Society, only one component medical society shall be chartered in any county. Where more than one county society exists, friendly overtures and concessions shall be made, with the aid of the Trustee for the district if necessary, and all of the members brought into one organization. In case of failure to unite, an appeal may be made to the Board, which shall decide what action shall be taken.
- 11.02 MEMBERSHIP QUALIFICATIONS: Each county society shall be judge of the qualifications of its own members, but, as such societies are the only portals to this Association, every reputable and legally registered physician who holds a degree of Doctor of Medicine, a degree of Bachelor of Medicine or who holds a valid, unrestricted license to practice medicine and surgery shall be eligible for membership. Provided, however, that each county society may deny membership in such society for infraction or violation of any law relating to the practice of medicine or of the Constitution and Bylaws of such society, the Constitution and Bylaws of the Indiana State Medical Association, the Constitution and Bylaws of the American Medical Association, or for a violation of the Principles of Medical Ethics of the Indiana State Medical Association; and may, after due notice and hearing, censor, suspend or expel any member for any such infraction. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every physician in the county to become a member.
- 11.03 RIGHT OF APPEAL: Physicians who may feel aggrieved by the action of the society of their county in refusing them membership, or in suspending or expelling them, shall have the right to appeal to the Board, and its decision shall be final.

In hearing appeals the Board may admit oral or written evidence as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual Trustees in district and county work, efforts at conciliation and compromise shall precede all such hearings.

- 11.04 MEMBERSHIP TRANSFER: When members in good standing in a component society move to another county in this state, their names shall be transferred without cost to the roster of the county society into whose jurisdiction they move, provided the transfer is approved by majority vote of the membership of said society to which the transfer is proposed. Physicians who have the major part of their practice in a county other than the county in which they reside may hold membership in the county society of their residence or in the county society of the county in which they have the major part of their practice. However, physicians shall not hold active membership in more than one county society at the same time.
- 11.05 DIRECTION OF PROFESSION: Each component society shall have general direction of the affairs of the profession in its county, and its

influence shall be constantly exerted for bettering the scientific, moral and professional status of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified and honorable physician in the county.

- 11.06 SELECTION OF DELEGATES: At the annual business meeting for election of officers, in advance of the Annual Convention of this Association, each county society shall elect Delegates and Alternates to represent it in the House of Delegates of this Association, and the Secretary of the society shall send a list of such Delegates and Alternates to the Executive Director of this Association annually on or before February 1.
- 11.07 SECRETARIAL DUTIES: The Secretary of each component society shall keep a roster of all its members and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary. In keeping such a roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making the required annual report the Secretary shall be certain to account for every physician who has lived in the county during the year.

The Secretary of each component society shall prepare and send to the Trustee of the Secretary's district a quarterly report briefly stating the activities of the Secretary's county society including meetings, programs, changes in officers and personnel or membership. A copy of this quarterly report to the Trustee shall also be sent to the Executive Director of the Indiana State Medical Association. The Indiana State Medical Association shall supply each County Secretary a form for these reports.

11.08 FISCAL YEAR AND DUES: The fiscal year of the Association shall be from October 1 to September 30 of the succeeding year. The dues shall be collected by the calendar year and payable in advance. Unless collected by the Indiana State Medical Association, the Secretary of each component society shall forward the dues for the society to the Executive Director of this Association and shall furnish the Indiana State Medical Association headquarters with a roster of officers, members, and a listing of non-affiliated physicians of the county, on or before January 1 of each year, and shall promptly report thereafter the names of any new members elected to membership in the society, and promptly forward to the Executive Director of this Association the dues for such members.

The dues and the rights and benefits of all members shall be as provided in 1.00 et seq. of the Bylaws.

11.09 FAILURE TO PAY DUES: Any county society which fails to pay dues or make the report required by January 15 of each year shall be delinquent. Any county society which fails to pay dues or make the report by April 30 shall be held suspended, and none of its members or delegates shall be permitted to receive any of the publications of the Association or participate in any of the business or proceedings of the Association or of the House of Delegates until such requirements have been met.

- 11.10 SECRETARY DIRECTION: Each county society shall be held responsible for the faithfulness in the performance of duty on the part of its Secretary in making reports and remitting dues to the Association.
- 11.11 CONSTITUTION AND BYLAWS: Each component society shall have its own Constitution and Bylaws, which shall not be in conflict with the Constitution and Bylaws either of this Association or of the American Medical Association. An up-to-date copy thereof shall be filed with the Executive Director of the Indiana State Medical Association not later than May 1 of each calendar year, or where such copy is so on file and no change has been made, then it shall be sufficient to file a certificate to that effect with the Executive Director.

12.00 OTHER COMPONENT SOCIETIES

- 12.01 CHARTERS: All component societies now in affiliation with this Association and those which may hereafter be organized in this state, which have adopted principles of organization not in conflict with this Constitution and Bylaws, or those of the American Medical Association, shall receive a charter from and become a component part of this Association. The acceptance or retention of this charter shall be regarded as a pledge on the part of said component society to conduct itself in harmony with the letter and spirit of this Constitution and Bylaws and other rules and resolutions of this Association. Charters shall be issued only upon approval by the Board and shall be signed by the President and Executive Director of this Association. The Board shall have the authority to revoke the charter of any component society whose actions are in conflict with the letter and spirit of this Constitution and Bylaws or those of the AMA.
- 12.02 CONSTITUTION AND BYLAWS: Each component society shall have its own Constitution and Bylaws, which shall not be in conflict with the Constitution and Bylaws either of this Association or the American Medical Association. An up-to-date copy thereof shall be filed with the Executive Director of the Indiana State Medical Association not later than May 1 of each calendar year, or where such copy is so on file and no change has been made, then it shall be sufficient to file a certificate to that effect with the Executive Director.

12.03 INTERN AND RESIDENT MEDICAL SOCIETY (IRMS):

- 12.0301 Composition: Residents or Interns enrolled in AMA accredited programs in the state of Indiana shall be eligible to join the Intern Resident Medical Society with all rights and privileges as a regular member of ISMA. This society shall be allowed to send one delegate or alternate delegate to the House of Delegates with full voting privileges. Any member of this society shall be eligible to hold office. There shall be only one IRMS.
- 12.0302 Organization: This society shall be organized similarly to other component medical societies. Upon call of the President, all eligible interns and residents shall be invited to join the IRMS by attending an organizational meeting as soon as expeditiously possible. Appropriate officers shall be elected by those in attendance in order to conduct the affairs of this

society. This society shall then become a component medical society.

- 12.0303 Secretarial Duties: The Secretary of the IRMS component society shall keep a roster of all its members in which shall be shown the full name, address, college and date of graduation, date of license to practice in this state, and such other information as may be deemed necessary.
- 12.0304 Dues: The IRMS member shall pay dues to ISMA at 10% that of the regular member, rounded off to the nearest whole dollar which shall entitle the member to full rights and privileges of ISMA membership. These dues shall be collected in accordance with ISMA Bylaws. No relief of dues shall be possible.

12.04 MEDICAL STUDENT SOCIETY

- 12.0401 Composition: Medical students actively enrolled in an accredited medical school in Indiana are members of this society with all rights and privileges as described in 1.0104.
- 12.0402 Organization: The Student Council of the Indiana University School of Medicine shall elect a student delegate and alternate delegate from nominees presented to them from each class. All resolutions introduced in the name of the student body must be presented through the Student Council functioning as the executive body of the student members in effect, a student component society.
- 12.0403 Dues: Medical Student members shall be assessed no dues, but may subscribe to INDIANA MEDICINE at the current rate determined from time to time by the Board of Trustees.
- 12.0404 Secretarial Duties: The Secretary of the Student Medical Society shall submit to ISMA each year a roster of medical students actively enrolled in an accredited medical school in Indiana.

13.00 TRUSTEE DISTRICT MEDICAL SOCIETIES

- 13.01 COMPOSITION: A Trustee District Medical Society, hereinafter called the district society, shall be a society whose members consist of the members of the county medical societies in the counties which constitute the Trustee district.
- 13.02 NUMBER OF DISTRICTS: The state shall be divided into thirteen Trustee districts with the boundary lines and number of each district to be as follows:

First District--Posey, Vanderburgh, Warrick, Spencer, DuBois, Perry, Pike and Gibson Counties.

Second District--Knox, Daviess, Martin, Monroe, Owen,

Greene and Sullivan Counties.

Third District--Crawford, Harrison, Floyd, Clark, Scott, Washington, Orange and Lawrence Counties. Fourth District--Jackson, Jennings, Jefferson,

Switzerland, Ohio, Dearborn, Ripley, Decatur, Bartholomew and Brown Counties.

Fifth District--Clay, Vigo, Vermillion, Parke and Putnam Counties.

Sixth District--Shelby, Rush, Fayette, Franklin, Union, Wayne, Henry and Hancock Counties.

Seventh District--Morgan, Johnson, Marion and Hendricks Counties.

Eighth District--Madison, Delaware, Randolph, Jay and Blackford Counties.

Ninth District--Fountain, Montgomery, Boone, Hamilton, Tipton, Clinton, Tippecanoe, Warren, Benton, White, Newton and Jasper Counties.

Tenth District--Porter and Lake Counties.

Eleventh District--Carroll, Howard, Grant, Wabash, Miami, and Cass Counties.

Twelfth District--Wells, Adams, Whitley, Allen, Noble, Huntington, DeKalb, LaGrange and Steuben Counties.

Thirteenth District--Pulaski, Fulton, Kosciusko, Marshall, Starke, LaPorte, St. Joseph and Elkhart Counties.

- 13.03 CONSTITUTION AND BYLAWS: Each district society shall adopt a Constitution and Bylaws, which shall not conflict with the Constitution and Bylaws of the Indiana State Medical Association, or those of the American Medical Association, and only one district society shall exist within any one Trustee district. The authorized district society in each Trustee district shall receive a charter from the Indiana State Medical Association, and the Secretary of the district society shall have custody of the charter.
- 13.04 OFFICERS: Each district society shall organize by electing a President, a Secretary and a Treasurer and Trustee(s) and Alternate Trustee(s) as the current Trustee(s) term and Alternate Trustee(s) term for the district expires, and such others as may be provided for in its Constitution and Bylaws. The office of Secretary and Treasurer may be held by the same physician. The Trustee(s) shall continue to have the same duties and terms as are set forth in the Constitution and Bylaws of this Association.
- 13.05 TRUSTEE ALLOCATION: Each district society shall have one Trustee and one Alternate Trustee for each 600 regular members or major fraction thereof but in any event each district shall have one Trustee and one Alternate Trustee. The term of each trusteeship newly created by the numerical growth of a district shall begin at the organization meeting of the Board immediately following the adjournment of the final session of the House of Delegates at the next Annual Convention in accordance with 5.06.
- 13.06 DUES: The dues of the district society, in an amount fixed by the district society to meet the society needs, shall be collected by the Secretaries of the component county societies, or by the Indiana State Medical Association and delivered to the Treasurer of the district society. The Secretary of each district society shall report to the office of the Indiana State Medical Association the names and addresses of the members of the district society, together with a copy of the minutes of each meeting of the district society.

13.07 MEETINGS: Each district society shall meet at least once each year at a time and place to be fixed by the district society. On or before January 1 of each year each district society shall notify the headquarters of the Indiana State Medical Association of the time and place of the annual district meeting for that year; but if no such notification has been received in the headquarters on or before the January meeting of the Board, the Trustee shall fix the time and place of the district meeting, and notice of such meeting shall be sent to the members of the county medical societies in such district.

13.08 NOTIFICATION TO HEADQUARTERS:

- 13.0801 Election of Trustee or Alternate: Whenever a district society is to elect a Trustee and/or Alternate, the headquarters office of the Indiana State Medical Association shall so notify the individual members of such district society not later than six weeks in advance of said election date.
- 13.0802 Agenda for Meeting: The district society shall send to the headquarters office a copy of its program showing the time and place of its meeting, early enough that the headquarters office may notify all members within the district of the meeting at least thirty days prior to the date thereof.

14.00 MEDICAL DEFENSE - MEDICAL DEFENSE ADMINISTRATION, AUTHORITY AND PROCEDURES

- 14.01 ADMINISTRATION: The administration of this entire section shall be entrusted to the ISMA Executive Committee which shall have full authority to develop rules and procedures, and make reports as it may deem appropriate. Any matter not specifically addressed in this section shall be left to the discretion of the Executive Committee.
- 14.02 POLICY AND PURPOSE: It shall be the policy of ISMA that this section of the Bylaws shall only be used as authority to involve ISMA in medical defense and/or countersuit litigation that is of such a nature that the issues presented are of significant concern and impact on the practice of medicine as a whole. In no event shall this section be construed as authority or obligation for ISMA to involve itself in litigation that is primarily a matter of individual concern. This section shall not be construed as authority for ISMA to hire attorneys and pay expenses on behalf of an individual member. However, the Executive Committee is empowered to expend funds for attorneys and other experts who may be required in the pursuit of litigation that may have an impact on the practice of medicine as a whole.
- 14.03 ELIGIBILITY—Request for ISMA Involvement—Procedure: Before a request for ISMA involvement will be considered by the ISMA Executive Committee the following conditions should be met:
 - (a) The physician making the request should be a member in good standing of ISMA.
 - (b) A written request for ISMA involvement in medical defense and/or countersuit litigation should be sent to the Executive Committee detailing the facts of the case as well as why the issues involved are of such a nature that they impact on the practice of medicine as a whole.

(c) A written statement of support from the physician's county medical society should accompany the request for ISMA involvement.

15.00 MISCELLANEOUS - DIVISION OF FEES

This Association does not countenance or tolerate fee-splitting, division of fees, or commission paying directly or indirectly, and any member found guilty shall be expelled from membership.

16.00 PARLIAMENTARY PROCEDURE

The deliberations of this Association shall be governed by parliamentary usage as prescribed in the current edition of Sturgis Standard Code of Parliamentary Procedure, when not in conflict with this Constitution and Bylaws.

17.00 AMENDMENTS

- 17.01 BYLAWS AMENDMENTS: These Bylaws may be amended by resolution, as in 3.02070lb, which shall be treated as any other proposed amendment, at any meeting of the House of Delegates by a majority vote of all the Delegates present. Amendments to the Bylaws must be submitted to the Association 45 days in advance of the meeting. These amendments must be presented to the Commission on Constitution and Bylaws prior to the meeting and are eligible for passage after lying on the table for one day.
- 17.02 OTHER: Any other Bylaw amendment presented to the House of Delegates will not be eligible for consideration by the House of Delegates unless two-thirds majority of the first session of the House of Delegates votes to consider the amendment as presented.
- 17.03 AMENDMENT IMPLEMENTATION: Amendments which are passed by the majority of the House become effective immediately and shall be submitted to the Commission on Constitution and Bylaws for implementation.

18.00 MEDICAL ETHICS

The Principles of Medical Ethics of the American Medical Association shall govern the conduct of members in their relations to each other and to the public.

AMERICAN MEDICAL ASSOCIATION

PRINCIPLES OF MEDICAL ETHICS

Preamble:

The medical profession has long subscribed to a body of ethical statements developed primarily for the benefit of the patient. As a member of this profession, a physician must recognize responsibility not only to patients, but also to society, to other health professionals, and to self. The following Principles adopted by the American Medical Association are not laws, but standards of conduct which define the essentials of honorable behavior for the physician.

- I. A physician shall be dedicated to providing competent medical service with compassion and respect for human dignity.
- II. A physician shall deal honestly with patients and colleagues, and strive to expose those physicians deficient in character or competence, or who engage in fraud or deception.
- III. A physician shall respect the law and also recognize a responsibility to seek changes in those requirements which are contrary to the best interests of the patient.
- IV. A physician shall respect the rights of patients, of colleagues, and of other health professionals, and shall safeguard patient confidences within the constraints of the law.
- V. A physician shall continue to study, apply and advance scientific knowledge, make relevant information available to patients, colleagues, and the public, obtain consultation, and use the talents of other health professionals when indicated.
- VI. A physician shall, in the provision of appropriate patient care, except in emergencies, be free to choose whom to serve, with whom to associate, and the environment in which to provide medical services.
- VII. A physician shall recognize a responsibility to participate in activities contributing to an improved community.

RONALD G. BLANKENBAKER, M.D. State Health Commissioner

PUBLIC HEALTH NOTES

New information from Office of the Commissioner Indiana State Board of Health 1330 W. Michigan St. Indianapolis, Ind. 46206 317-633-8400

In 1983 there were 411 new cases of tuberculosis reported and verified in Indiana. This represents a 3% increase in the state's morbidity level when compared with 1982. More importantly, the state's 1983 data show a 10% increase over the levels reported in 1981, the year in which TB morbidity reached its lowest level

Since 62% of all cases reported in 1983 were in people aged 50 and over, the need for updated surveillance activities for this age group became evident. Therefore, the following areas were addressed in our recommendations for the new 1984 health facilities rules: (1) skin testing procedures, (2) x-ray recommendations, and (3) documentation and exchange of information between local health departments and health facilities.

Several aspects of the skin testing procedure deserve mention. First, because we have had to address so many skin test "conversion" problems, the two-step TB skin test has been included in the new rules in order to obtain more accurate baseline information. The rule for both employees and residents (410 IAC 16.2-3-13(E)(ii) and 410 IAC 16.2-2-5(f)(1)) now states: "For initial examination on persons age 55 and over, a second test shall be administered at least one week and no more than three weeks after the first test, if the measurement is 0-9 mm."

Two-step testing helps differentiate between two sub-groups of individuals, both of whom would appear negative if they were given only one test: (1) those who had never been infected, and (2) those who had previously been infected but whose immunity had waned to levels not detectable with only one test. The two-step procedure assures the facility that the individual who tested positive on the second test had been infected prior to the first test, which could be important to the facility in medico-legal or workmen's compensation cases.

The two-step procedure also avoids the epidemiological problems which could accompany the discovery of booster-induced reactions six months to a year

later, which would normally be interpreted as indicating new infections. The two-step testing procedure is recommended only for those employees or residents of health facilities, age 55 and over, with no documented history of a negative skin test for TB.

Two-step testing is no longer needed or required once a baseline is established. Once this information is obtained and on record for all employees and residents, it will be much simpler to determine the necessary procedures if skin test conversions occur.

The other significant skin testing rule change involves the certification requirement. According to 410 IAC 16.2-3-13-(3)(I), "All licensed personnel giving Mantoux (5TU, PPD) skin tests shall have documentation of completion of an approved course of instruction in intradermal skin testing, reading and recording."

Persons administering the test need to understand the antigen which is used (tuberculin), the basis for reactions to this antigen, administration technique, reading, recording and interpreting of the test results. Because detection of infected persons requires accurate testing and reading, multiple puncture devices (Tine, Aplitest, etc.) should not be used in tuberculin testing surveillance programs. The intracutaneous Mantoux tests using 5TU tuberculin, PPD, is the *only* accepted diagnostic aid to detect turberculous infection and to determine the prevalence of infection in groups of people.

It should be pointed out that both a chest x-ray and a Mantoux (5TU, PPD) skin test are required for admission to a facility.

410 IAC 16.2-3-13-(3)(E) says: "A diagnostic chest x-ray completed no more than six months prior to admission or at admission shall be required. In addition, a Mantoux test (5TU, PPD) shall be completed within three months prior to admission or administered upon admission and read at 72 hours."

The chest x-ray is needed to reveal evidence of turberculosis in persons whose turberculin skin tests may be

falsely negative. If the prospective resident is in a hospital, the hospital must do the necessary testing. If necessary, and *only* if the chest x-ray is negative for TB, the first Mantoux (5TU, PPD) can be given in the hospital and the reading and second skin test (if necessary) can be done in the facility to which the resident is being admitted.

In the area of x-ray recommendation, we are relying on (1) the completion of adequate treatment for TB infection and/or disease, and (2) the physician's *continued* medical management of the patient's health, whether resident or employee.

Rules 410 IAC 16.2-3-13(3)(F) and 410 IAC 16.2-2-5(f)(1)(A) read as follows: "All employees (residents) who have a significant reaction (10 mm or more) to the skin test shall be required to have a chest x-ray and other physical and laboratory examinations in order to complete a diagnosis. Employees with no findings of active pulmonary turberculosis who have completed preventive treatment or adequate therapy for disease as prescribed by a physician shall have an annual chest x-ray unless the attending physician or medical director of the facility provides a signed statement that the chest film is not necessary and that the physician will continue to monitor the employee for development of active tuberculosis.'

Additionally, these rules state: "Employees unwilling or unable to comply with prophylaxis will be required to have a minimum of two consecutive negative annual chest films before such exception may be granted."

Persons who are *infected only* and who do not comply with prophylaxis are *required* to have the minimum of two consecutive negative annual chest films in order to comply with the regulation.

Documentation and exchange of information between facilities and local health agencies involves recording the current skin test and x-ray information on a transfer sheet and sending it with the resi-

CONTINUED ON PAGE 419

FOR MEDICAL PROFESSIONAL LIABILITY COVERAGE, THE ISMA STRONGLY RECOMMENDS PHYSICIANS INSURANCE COMPANY OF INDIANA. Several companies are

anxious to provide most Indiana physicians with medical professional liability insurance coverage. *Only one* has received the formal endorsement, support, and sponsorship of the Indiana State Medical Association. That company is PICI, Physicians Insurance Company of Indiana.

Why PICI?

Because PICI is committed to providing Indiana physicians with the best possible coverage at the lowest possible rates throughout their medical careers. Indiana physicians dominate the company's board of directors and serve on budget, claims and underwriting committees. PICI is a publicly held stock company, and provides annual as well as periodic interim financial reports.

With PICI, you know what's happening to your premium dollars. You will receive information about claims experience and trends. You are guaranteed input on company activities, through your physician members of the company's board and its committees. You are part of the company.

Through PICI, you also receive competitively priced auto, homeowners, office protection and personal umbrella coverages, designed and offered with the same long term commitment.

Compare all that PICI offers with what you will obtain from other sources of medical professional liability and other essential insurance coverages. We think you'll agree that the ISMA has endorsed the best.

The Accountable Company . . .



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To obtain Category 1 credit for this month's article, complete the quiz on page 373.



Total Parenteral Nutrition: Indications and Techniques

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Acknowledgments: Linda Collyer and Ann Trimpe for secretarial assistance.

OTAL PARENTERAL NUTRITION (TPN) is an invaluable adjunct to the care of surgical patients. The purpose of this report is to delineate a successful method of administering total parenteral nutrition with emphasis on the nutritional assessment, technique of central line placement, calculation of component requirements, the monitoring of therapy and the measurement of success of this important therapeutic modality.

Each person has a caloric and amino acid requirement which is supplied by normal dietary intake. In the healthy unstressed and inactive individual, this nutritional requirement is referred to as the resting metabolic energy expediture (RMEE) and is dependent on many factors such as height, weight, age, sex, and general metabolic rate. When energy requirements exceed intake, the organisms become catabolic and use stored energy to totally or partially fulfill ongoing metabolic needs.

For the most part, energy in the normal state is provided by carbohydrates or ketones. In the totally starved individual, however, nearly all of the carbohydrate stored as hepatic and muscular glycogen is exhausted in less than 24 hours. Triglyceride mobilization then begins, and ketones become the major source of energy for most tissues. However, the brain, red blood cell and renal tubule require glucose as a substrate and their need is met by protein catabolism via gluconeogenesis.

While both carbohydrate and fat can be stored, protein is entirely structural, existing in muscle or other amino acid containing components such as serum proteins, cellular structures, enzymes and hormones. Prolonged catabolism affects the individual's ability to heal wounds, fight infection and respond to even mild stress.

Therefore, it is important to recognize those individuals who have had their pro-

tein stores depleted by disease, injury or surgery. These patients will be at risk for a less favorable outcome of surgery or other treatment if their malnutrition goes unrecognized and untreated. 1. 8

Nutritional Assessment

Appropriate patient selection is the initial step in the application of TPN. Any patient about to undergo a major operation who has a history of significant weight loss (more than 10 lbs.), poor dietary habits or unusual gastrointestinal losses should be evaluated with a formal nutritional assessment.

While there is some debate regarding the most accurate tests to use,4 current techniques involve widely accepted and readily available tests and techniques to assess both the somatic and visceral protein compartments (Table 1). Patients are then categorized as normal, mildly depleted (90% normal lab values or established standards), moderately depleted (60-90% normal), or severely depleted (<60% of normal) (*Table 1*). The final decision on whether or not to institute nutritional support preoperatively is then determined by the severity of the contemplated surgical treatment (Table 2). These same tests also may determine the duration of preoperative TPN. A severely depleted patient about to undergo pancreatectomy or esophagogastrectomy probably would benefit from a minimum of 10-14 days of preoperative TPN, while a mild or moderately depleted patient awaiting colectomy may only require perioperative TPN.

Once the need for nutritional support has been ascertained, the route for administration must be chosen. We generally adhere to the axiom "if the gut works, use it." This may simply mean high quality oral supplements or the placement of a naso-enteral feeding tube with continuous high caloric drip feedings. Although this is a safer and usually cheaper method than parenteral feeding, the patient's disease status may prevent the alimentary tract from digesting and absorbing all of the necessary nutrients. In addition, slow gut adaptation to hypertonic nutrients may

TABLE 1 Nutritional Assessment

PROTEIN	PARAMETER	[DEPLETION LEV	EL
COMPARTMENT				
			60-90% (MODERATE)	
SOMATIC	WEIGHT FOR HEIGHT*			
	MIDARM MUS CIRCUMFEREI (MAMC)* *			
VISCERAL***	TOTAL LYMPH CYTE COUNT (TLC)	-		
	ALBUMIN			
	TRANSFERRIN			
	CREATININE HEIGHT*** INDEX (CHI)			
SKIN TESTS***		N		
* See Append				
* * MAMC (cm)	= Midarm Circ	umference (cm) 3.14 X Tri	iceps Skinfold

TABLE 2 Indications for TPN

		Procedure		
		Minor*	Major**	
D				
Е	Mild	No	Consider	
Р				
L	Moderate	Consider	Yes	
Е				
Τ	Severe	Yes	Yes	
0				
Ν				

- * Examples: Herniorrhaphy, Cholecystectomy, Hysterectomy
- ** Examples Pancreatectomy, Gastrectomy, A-P Resection, Aorto-Bifemoral Bypass, Pneumonectomy

(cm)]

See Appendix 3

cause diarrhea, "dumping" symptoms or other feeding intolerance, delaying the full utilization of calories, protein, and other essential nutrients administered. If the immediate full use of the enteral route is not possible, then central venous TPN should be instituted to prevent continued catabolism and prolongation of hospital stay. However, if the patient is not awaiting surgery, it is safer and less expensive to utilize the gastrointestinal tract, if at all feasible.

Technique of Central Line Flacement

The technique of central line placement includes: (1) choosing an insertion site, (2) proper patient position, (3) strict aseptic technique, (4) avoidance of complications, (5) adequate line security, and (6) maintenance of line sterility.

Prior to insertion, coagulation studies should be normal. The subclavian vein is preferred over the internal jugular vein or femoral vein because long-term line aseptic maintenance is easier to achieve in the subclavian area than in the neck or groin. For chronic therapy, and in children, a surgically implanted line with a Hickman* or Broviac** catheter is easier to care for and has fewer long-term septic complications.

The patient is placed in the Trendelenburg position to engorge the subclavian veins and a rolled up towel is positioned beneath the thoracic spine between the scapulae to increase the angle between the first rib and clavicle (Fig. 1). The operator and any assistants wear masks and sterile gloves. The skin is first prepped with a defatting solution such as acetone, followed by a wide prep with an appropriate antiseptic agent. Sterile towels are used to drape out the insertion site. Lidocaine 1% is injected at the entrance site, which is 1 cm inferior and medial to the distalward curve of the clavicle (Fig. 1); additionally, the subclavicular periosteum is anesthetized. A large 16 gauge silastic or Teflon intracath is used. Teflon catheters have a lower thrombosis

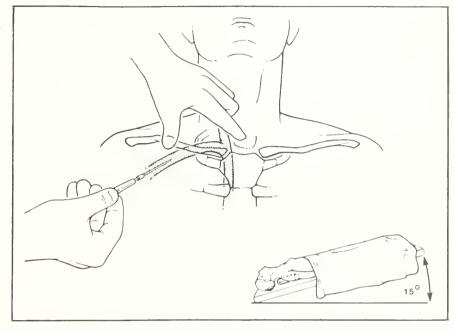


FIGURE 1: Technique of subclavian line placement.

rate, but have a tendency to kink and occlude.

The catheter needle is placed on a tuberculin syringe which is held in the operator's dominant hand while the index finger of the other hand rests in the suprasternal notch. The needle is pushed through the skin, beneath the clavicle, aiming for the index finger (Fig. 1). Once the clavicle is reached, the needle is "walked down" and under the clavicle. Great care is taken to keep the needle and syringe relatively horizontal to avoid penetrating the apex of the pleura. When the needle enters the lumen of the subclavian vein, free exchange of venous blood will be seen in the syringe. The syringe is removed and the opening of the needle covered with a thumb while the patient performs a Valsalva maneuver, to prevent air embolus. The catheter is then threaded through the needle to its fullest depth and then both are pulled back to predetermined length (so the tip rests at about the 2nd intercostal space) and a loop is created with the catheter. The catheter is then sutured to the skin in several places to provide security against dislodgement.

If the initial attempt at subclavian vein puncture is unsuccessful, the needle is

pulled back to just below the skin and redirected, thus avoiding changing direction near the major vessels, pleural apex, or brachial plexus to prevent their laceration. If an arterial puncture is inadvertently made, the needle is removed and direct pressure is applied above and below the clavicle for five minutes. Bleeding usually resolves if clotting studies are normal. If difficulty is encountered threading the catheter, the patient's head should be rotated toward the ipsilateral shoulder to take tension off the subclavian vein and help direct the catheter into the superior vena cava. If the catheter still won't thread, both needle and catheter should be pulled out as a unit. Attempts to pull the catheter back through the needle sheath may result in shearing off the catheter and embolization into the superior vena cava or right heart.

Once the IV line and catheter are connected, the intravenous fluid bottle may be lowered below the level of the patient's heart, looking for a "flash back" of blood through the catheter. An infusion of 5% dextrose is then begun, an occlusive sterile dressing is placed and an immediate portable chest x-ray is taken. If a significant pneumothorax or

^{*}Hickman Catheter: Product of Evermed Company, PO Box 296, Medina, Wash.

^{**}Broviac Catheter: Product of Evermed Company, PO Box 296, Medina, Wash.

hydrothorax is identified, chest tube thoracotomy is performed. The position of the catheter should always be above the right heart. If it resides in the right atrium, the catheter should be pulled back to prevent atrial erosion and penetration into the mediastinum. Misplacement cephalad into the internal jugular vein usually requires fluoroscopy and a guide wire for proper repositioning and, in general, it is simpler to remove the catheter and try again. No hyperosmolar solution should be started until the catheter position is confirmed to prevent complications such as thrombosis of the internal jugular veins.

Component Requirements and Administration

Water: Most adults without cardiac or renal compromise can tolerate 3 liters per day (125 cc/hr) which is a convenient amount since other nutritional requirements can be easily distributed among three liters per day. However, if the patient requires more volume because of ongoing fluid losses or pre-existing dehydration, the total volume can be increased with appropriate dilution of the other components. Similarly, if fluid restriction is necessary, a smaller total volume of a more concentrated TPN solution can be prepared.

Calories: Most debilitated patients require 40 Kcal/kg ideal body weight/day given in the form of dextrose.11 For example, a patient with an ideal weight of 60 Kg needs 2,400 Kilo calories or approximately 1,400 cc of D_{50} (1.7 cal/cc). This volume of dextrose is divided up equally among each day's bottles, placing 470 cc of 50% glucose in each of the 3 liter bottles. With this caloric goal established, lower glucose concentrations are started and gradually increased over several days to the calculated dextrose concentration, to prevent the possibility of hyperosmolar diuresis and dehydration. Insulin may be required in diabetics or other glucose intolerant patients; this can be added directly to the TPN solution starting with 10 units of regular insulin/liter and increasing as necessary to maintain plasma glucose levels between 150-200 mg%.

TABLE 3

Routine Orders to Monitor TPN, Assess Nutritional Status, and Protect TPN Line

- 1 Central line for TPN only
- 2. Change IV tubing to central line daily
- Electrolytes, glucose, BUN, creatinine, Q day X 5, then Q Monday, Thursday
- 4 C/A urine Q void, bedside urine test for sugar/acetone QID
- 5. CBC, CA++, phosphorus, cholesterol, triglycerides, SGQT, alkaline phosphorus, bilirubin, albumin and transferrin Q Monday
- 6 24-hour urine for creatinine. UUN Q Monday
- 7 Daily weights
- 8 500 cc 10% lipid solution Monday and Thursday

Protein: Positive nitrogen balance usually can be achieved by giving 1.2-1.5 gm protein/Kg ideal body weight. To utilize amino acids effectively, a calorie to nitrogen (Cal/N+) ratio of 150-200 K calories/gm N+ must be achieved. Thus, the above mentioned patient with an ideal weight of 60 Kg might receive 84 gm of protein per day (1.4 gm protein/Kg), which can be given as 1,000 cc of 8.5% amino acid solution divided equally among the day's three TPN bottles. Thus, this patient would be receiving 178 calories per gm N+

($\frac{2400 \text{ calories}}{84 \text{ gm protein}} \times \frac{6.25 \text{ gm protein}}{1 \text{ gm N}^+}$). When possible, patient activity is en-

couraged to stimulate the assimilation of the amino acids into the somatic protein pool as well as into the visceral compartment.

Special amino acid solutions are now available for use in specific situations. Hepatic amino acid solutions are intended for patients with hepatic failure. This solution contains mainly branched chain amino acids and very small amounts of aromatic amino acids. There is experimental evidence that aromatic amino

acids are precursors of false neurotransmitors that may cause or worsen hepatic encephalopathy.

Essential amino acid solutions have been recommended for patients with renal insufficiency who are not being dialyzed. Giving essential amino acids reportedly limits the rise of the blood urea nitrogen by "recycling" amino groups. In patients who are being hemodialyzed, this is not essential since urea nitrogen can be removed as often as necessary.

Branched chain amino acid solutions (BCAA), which differ from the hepatic solutions in amount of branched chain amino acids present, are thought to be beneficial in the traumatized and/or septic patient. These BCAAs seem to be better tolerated and utilized in these situations and may result in positive nitrogen balance more quickly.

Electrolytes: Maintenance sodium intake is 100-150 meg per day. However, patients with ongoing gastrointestinal losses may require more than this, and sodium intake can be increased if indicated. Adequate potassium is an important component of TPN, as it is required in large quantities in anabolism, since an expanding lean body cell mass will have a high intracellular K + content. Patients will eventually require 120-240 meg of K⁺ per day or more, but this should be approached gradually (starting with 60-100 meq/d) since hyperkalemia can be a serious problem in patients with marginal renal function. Other requirements include calcium (10 cc of a 10% calcium gluconate solution/day), phosphorus (15 mM/d) and magnesium (10 cc of 50% Mg sulfate/day).

Chloride and bicarbonate requirements are generally determined by the patient's overall acid-base requirements. Since bicarbonate is unstable in solution, it is usually given as lactate or acetate, and then converted to bicarbonate by the liver in the Cori cycle. It is important to monitor the electrolytes routinely and adjust the electrolytes constituents appropriately (*Table 3*). There are no "standard" patients and the use of a "standard" TPN solution or standard electrolyte solution is of questionable

APPENDIX 1
Weight (lb) for Height (inches), 50th Percentile

HEIGHT IN	SEX			AGE GROU	P IN YEARS	3	-
INCHES		18-24	25-34	35-44	45-54	55-64	65-74
57 INCHES	FEMALE	114	118	125	129	132	130
58 INCHES	FEMALE	117	121	129	133	136	134
59 INCHES	FEMALE	120	125	133	136	140	137
60 INCHES	FEMALE	123	128	137	140	143	140
61 INCHES	FEMALE	126	132	141	143	147	144
62 INCHES	FEMALE	129	136	144	147	150	147
	MALE	130	141	143	147	143	143
63 INCHES	FEMALE	132	139	148	150	153	151
	MALE	135	145	148	152	147	147
64 INCHES	FEMALE	135	142	152	154	157	154
	MALE	140	150	153	156	153	151
65 INCHES	FEMALE	138	146	156	158	160	158
	MALE	145	156	158	160	158	156
66 INCHES	FEMALE	141	150	159	161	164	161
	MALE	150	160	163	164	163	160
67 INCHES	FEMALE	144	153	163	165	167	165
	MALE	154	165	169	169	168	164
68 INCHES	FEMALE	147	157	167	168	171	169
	MALE	159	170	174	173	173	169
69 INCHES	MALE	164	174	179	177	178	173
70 INCHES	MALE	168	179	184	182	183	177
71 INCHES	MALE	173	184	190	187	189	182
72 INCHES	MALE	178	189	194	191	193	186
73 INCHES	MALE	183	194	200	196	197	190
74 INCHES	MALE	188	199	205	200	203	194

value in the care of the critically ill.

Trace Metals and Vitamins: The currently available trace metal solution, given as 2 cc/day, provides 10 mg zinc - (maintenance 2-3 mg), copper 2 mg (maintenance 2-3 mg), chromium .2 mg (maintenance 100-200 mcg), and manganese 1 mg (maintenance 1-3 mg). Patients on long-term TPN should have their zinc and copper levels checked periodically, particularly those individuals with unusual gastrointestinal fluid losses. Zinc deficiency may manifest as a skin rash and is seen in patients with diarrhea and steroids such as patients with inflammatory bowel disease.

Daily adult vitamin requirements are adequately met by 10 cc per day of MV1-12* which provides more than ade-

quate amounts of both the fat and water soluable vitamins as well as vitamin B_{12} and folate. Iron should be replaced as indicated by serum measurements.

Essential Fatty Acids: All patients on TPN should be provided with 8% of their daily calories two times per week as fat. This prevents fatty acid deficiencies (primarily linoleic acid) that usually present with a seborrheic type rash. One can use either Intralipid* (soy bean base) or Liposyn** (safflower base), which are available as 10% and 20% solutions containing 1.1 and 2.2 K cal per cc respectively. Generally, patients receive 500 cc of 10% lipid solution over 46 hours twice a week. The presence of pancreatitis

generally does not contraindicate the use of lipids, but patients with liver disease and jaundice may have problems clearing the fat, and large amounts of fat which are suggested in peripheral solution are to be avoided.

Heparin: 1,000 units of heparin are added to each bottle to help prevent catheter thrombosis.

Maintenance & Monitoring

The use of total parenteral nutrition requires a definite commitment to follow certain controls closely and to prevent complications. In some situations, this may require formation of a nutrition team composed of physicians, nurses, pharmacists and dieticians.

Sepsis: Sepsis is the major complication of TPN, usually arising from subclavian line contamination." *Staphylococcus epidermidis*, *S. aureus* and *Candida*

^{*}MVI-12: Product of U.S.V. Laboratories, 1 Scarsdale Rd., Tuckahoe, New York.

^{*}Intralipid: Product of Cutter Laboratories, 2200 Powell, Emeryville, California.

^{**}Liposyn: Product of Abbott Corp., North Chicago, Illinois.

albicans are the most commonly cultured organisms. This complication can be nearly eliminated by strict attention to aseptic line care (Table 3). The intravenous tubes connected to the TPN lines are changed daily and the central line dressings are changed three times per week. If a semipermeable plastic dressing such as OP-SITE*** is used, dressing changes may be less frequent. A patient with a central line who develops fever should be evaluated thoroughly for the etiology of the infection including urine, sputum and wound cultures as well as peripheral and central line blood cultures. If central line cultures are positive or if another source cannot be found, the line should be removed for at least 24 hours while the patient is maintained on peripheral intravenous solutions.

Catheter sepsis that persists after removal may require intravenous antibiotics and the possibility of complications such as subacute bacterial endocarditis or metastatic abcesses should be investigated. In general, TPN lines should be reserved for hyperalimentation only. The use of these catheters for drawing blood or for the administration of drugs or other solutions increases the likelihood of contamination. Permanent central lines that become infected can be managed initially by antibiotics given through the line, but may eventually require removal.

Electrolyte Imbalances: These can be prevented by providing adequate quantities of each electrolyte to begin with and then monitoring serum chemistries and making solution component adjustments as indicated. When first starting TPN, monitoring should be done daily, then once a "steady state" is established, a routine study once or twice a week will suffice (*Table 3*).

Hyperglycemia or Hypoglycemia: Serum glucose levels and routine urine checks for sugar and acetone are monitored closely, especially when therapy is initiated. Hyperglycemia can cause a significant osmotic diuresis, while

APPENDIX 2 Midarm Muscle Circumference (CM)

AGE	MALE	FEMALE
(YEARS)		
18-24	27.2	20 6
25-34	28 0	21 4
35-44	28 7	22.0
45-54	28 1	22.2
55-64	27.9	22.6
65-74	26.9	22.5

hypoglycemia can cause CNS neurological derangements and even seizures. These patients should be treated as brittle diabetics until the pancreas and/or exogenous insulin doses match the increased glucose load.

Subclavian Vein or Superior Vena Cava Thrombosis: This is a rare complication of central line placement which really cannot be totally prevented. It should be suspected if the upper extremity suddenly swells or becomes painful. Thrombosis is confirmed by venography and systemic anticoagulation is usually indicated. Obviously, the line should be removed. Persistent cases may require active thrombolytic therapy with streptokinase or urokinase.

Air Embolus: Disconnection of the IV tubing from the central line may cause a fatal air embolus. This serious complication can be prevented by securing these connections with screw type locks or by taping each connection site.

Liver Damage: Prolonged TPN has been associated with cholestasis and hepatic damage. Liver function tests should be monitored weekly and the onset of jaundice should generate an investigation as to its source.

Serial Nutritional Reassessment: A formal nutritional assessment is performed weekly to determine the effects of TPN (Table 3). This includes weekly nitrogen balances to insure that the patients are receiving adequate amounts of calories and amino acids. The patients' weights are monitored and will usually show a slow steady gain. Rapid gains, on the other hand, usually indicate excess water retention. Serum transferrin is currently the most sensitive indicator of nutritional repletion and is used as the best sign of readiness for the indicated surgery. Increases in the total lymphocyte count and serum albumin and the conversion of skin tests may take several weeks. Other less objective changes also will be noted. Patients report a sense of well being, and postoperative wound granulation is much more rapid and "healthy" in appearance.

Discontinuing TPN: Total parenteral nutrition is almost always used as a temporary measure. Patients should be converted to the enteral route as soon as they can handle adequate calories and protein. During the conversion period, glucose concentrations are progressively decreased, causing a stimulation of appetite. The success of the enteral route is assessed by daily calorie counts and, when deemed adequate, the intravenous route may be totally discontinued.

APPENDIX 3 Nutritional Assessment

Parameter	Normal (low limit)		
Total lymphocyte count	1,500/mm ³		
Albumin	3 5 g/100 ml		
Transferrin	200 mg/100 ml		
Creatinine height index	Actual urinary creatinine X 100 Ideal urinary creatinine		
	Males: 23 mg/kg ideal weight Females: 18 mg/kg ideal weight		
Skin tests	10 mm induration		

^{***}OP-SITE: Product of T.J. Smith and Nephew Ltd, Welsyn Garden City, England.

Conclusion

Total parenteral nutrition is an important aspect of the management of patients who are nutritionally depleted or subjected to prolonged starvation and stress. Nutritional support improves survival and lowers morbidity in these patients. With careful attention to details, TPN can be administered safely. We have described our method of providing total parenteral nutrition with special emphasis on the nutritional assessment, line placement, calculation of needs, and TPN maintenance.

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Precursors to Malignant Melanoma: A National Institutes of Health Consensus Report Abstract

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The incidence of melanoma and the number of deaths from it are increasing in many areas of the world. There is evidence that early recognition and surgical removal of melanoma makes this a highly curable cancer. In recent years, medical scientists have become aware of a possible association between certain preexisting pigmented skin lesions and cutaneous melanoma. This interest has developed from identification of two suspected precursors to cutaneous melanoma: (1) acquired abnormal moles known as dysplastic nevi, present both in the general population and in certain melanoma-prone families, and (2) certain congenital nevi. Identification and appropriate management of such precursors could significantly reduce the incidence of and mortality from melanoma.

In an effort to resolve some of the questions surrounding these issues, the National Institutes of Health convened a Consensus Development Conference on Precursors to Malignant Melanoma Oct.

A copy of the NIH Consensus Report, "Precursors to Malignant Melanoma," may be obtained by writing to INDIANA MEDICINE, 3935 N. Meridian St., Indianapolis, Ind. 46208,

24-26, 1983.

This conference highlighted an important advance in our understanding of melanoma through the identification of a familial syndrome in which multiple dysplastic nevi are associated with development of melanomas. The dysplastic nevus is a distinctive lesion both clinically and histologically. Melanoma may also develop in congenital nevi. The histology and clinical features of both of these lesions are reviewed in the report.

Strategies for treatment and follow-up should be formulated individually, on the basis of the risk of melanoma to each patient. Patients with dysplastic nevi and a family history of melanoma should be followed frequently, with documentation of lesions and excision of changing nevi. The relatives of patients with melanomas should be examined for dyplastic nevi and melanoma in view of the familial aggregation of both lesions. Patients with congenital nevi should be followed periodically for changes. There is a relatively detailed outline of appropriate managment of patients with "dysplastic" nevi and congenital nevi regarding diagnosis, treatment, follow-up, familial screening and education.

Any physician involved in the diagnosis or treatment of melanoma should have a copy of this conference summary.

Skin Biopsy Techniques: Part 1

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Superformed in an office setting by physicians in many varied specialties. The following review is intended to provide guidelines in technique, and application of the various methods.

In this, the first of two articles, we will examine the indications for performing a skin biopsy, review the preparatory steps, and outline the details of three biopsy techniques, all of which can be done as an outpatient with minimal risk to the patient.

Indications

It is important first to determine the information that can be gained from a skin biopsy. Biopsies are done for two reasons: 1) to establish a diagnosis and 2) to evaluate the effectiveness of treatment. The physician with skills in clinical diagnosis of skin lesions can make an intelligent decision as to the necessity for biopsy. If the physician is confident of the clinical diagnosis and forsees improvement with relatively benign modes of therapy, there is no need for a biopsy. It is the difficult diagnosis or one that may require the use of aggressive pharmacologic, surgical, or radiation therapy techniques which warrants establishment of a firm diagnosis from histopathologic review of representative tissue. The type of lesion and the anatomical location of the lesion will help determine the particular biopsy technique to be used. It is extremely important to get adequate tissue so the histopathologist can make

an accurate diagnosis. A skin biopsy specimen that is too small or superficial may lead to mis-diagnosis or no diagnosis and is of no benefit to the patient.

Preparation for Skin Biopsy

To achieve good results with a skin biopsy, time must be taken to plan an approach and prepare the patient. Several factors need to be evaluated. The physician must be aware of the general physical and emotional health of the patient, as well as the patient's cosmetic expectations. The size and shape of the lesion and vital structures that may underlie the lesion (e.g., facial nerve) are essential considerations in planning an approach. Finally, the physician's own personal skills and experience will enter into the choice of the best method of biopsy.

The biopsy site must be cleansed shortly before surgery to reduce the number of surface bacteria. A 70% isopropyl alcohol wash for a full three minutes will provide adequate, immediate antisepsis. Other good alternatives with both immediate and residual antiseptic activity are 4% chlorhevidine gluconate (Hibiclens) or povidone iodine (Betadine). Before injection of anesthesia the line of incision should be outlined with 1% gentian violet or a sterile pen.

Cosmetic results will be improved if a punch or excisional biopsy can be planned so the resultant scar falls along relaxed skin tension lines. One way to determine the best incision line is to pinch the skin in several different directions, and then plan the excision so the scar will be parallel to the lines of least tension. Skin tension lines of the face can be determined by having the patient make exaggerated facial expressions. In the excisional biopsy of a suspected malignant melanoma, the lines of excision should follow the direction of regional lymph node drainage, and therefore may not fall in relaxed skin tension lines.

Anesthesia is generally obtained with

intradermal injection of the amide linkage type of local anesthetic. Of the several types available, lidocaine hydrochloride is the most commonly used agent because of its rapid onset of action and low incidence of allergic reactions. The physician should always be prepared to handle the rare systemic reaction to lidocaine. For most situations, 10% or 20% lidocaine with epinephrine 1:200,000 will provide rapid anesthesia with minimal discomfort. Epinephrine prolongs the anesthetic effects of lidocaine by reducing hemodilution by vasoconstriction. Epinephrine is often omitted from the preparation when it is used on acral surfaces.

The anesthetic is injected slowly around the periphery of the lesion with a 1 to 1½-inch 27 or 30 gauge needle. If cancer is suspected, it is best to avoid injecting directly through the tumor. The biopsy procedure may begin after waiting approximately five minutes for the anesthetic to take effect.

Biopsy Techniques

Five biopsy techniques that are commonly used in cutaneous surgery will be discussed:

- 1. Seissor biopsy
- 2. Shave or saucerization biopsy
- 3. Punch biopsy
- 4. Fusiform excisional biopsy
- 5. Fusiform incisional biopsy

Scissor Biopsy: This technique is most helpful for pedunculated benign lesions (i.e., skin tags, filiform warts, or pedunculated nevi) and lesions on the thin skin of the eyelids or penile shaft. The method yields excellent cosmetic results but is inadequate for a suspected malignancy or dermal disease process.

After anesthesia has been obtained the tissue is elevated with forceps to expose the base. An iris scissors is placed at the base of the lesion with the concave side up and the base of the lesion is transected. Hemostasis can be attained by direct pressure, a hemostatic agent such as

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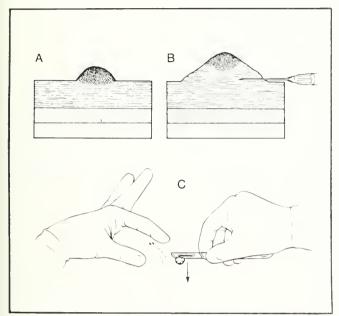


FIGURE 1: A—The shave biopsy technique is often appropriate for elevated skin lesions.

- B—The skin lesion is infiltrated with local anesthetic.
- C —The surrounding skin is stretched and the lesion is transected at or slightly below the skin surface.

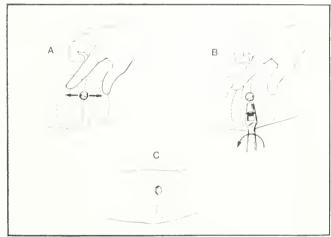


FIGURE 2: A—The skin is manually stretched at 90° to the relaxed skin tension lines or natural skin wrinkle lines before the punch biopsy is performed.

- B—The biopsy punch is inserted over the skin lesion and is rotated in one direction while applying downward pressure to the punch handle.
- C —The skin specimen is transected with scissors or scalpel at the level of the subcutaneous fat. An elongated wound is created that can easily be closed with sutures.

Monsel's solution, or light electrodesiccation.

Shave or Saucerization Biopsy: A biopsy of this type is useful for sampling both benign and malignant lesions including benign nevi, keratoses, basal cell carcinomas, and squamous cell carcinomas. It is simple to perform and results in minimal scarring (*Fig. 1A*).

The local anesthetic is first injected (Fig. 1B). The shave biopsy is done with a #15 scalpel blade for relatively flat surfaces, or half of a double-edged Gillette blade bowed between the thumb and index finger for curved surfaces. The lesion is stabilized by gently stretching the skin on either side of it. The blade is held parallel to the surface of the skin, and the lesion is removed with a gentle sawing motion (Fig. 1C). Increasing the angle of the blade to the surface of the skin will result in a saucerization biopsy, which produces a specimen that is convex on its undersurface. Bleeding can be controlled with direct pressure, a hemostatic agent,

or light electrodesiccation.

A disadvantage of this biopsy technique is the occasional problem with hypo- or hyperpigmentation of the healed biopsy site.

Punch Biopsy: The punch biopsy technique is preferred when pathologic examination of the deeper dermis is desired. It is not the method of choice, however, for evaluation of pathology in the subcutaneous fat. It is useful for evaluating inflammatory lesions and for the removal or sampling of small benign or malignant neoplasms.

A skin biopsy punch is a circular cutting instrument that is available in a variety of diameters ranging from 1-12mm. A 3 or 4mm. in diameter punch is adequate in most instances, and when done properly subcutaneous tissue can be obtained.

After injecting the anesthetic agent, the skin surrounding the lesion is stretched perpendicular to the natural skin tension lines (*Fig 2A*). This is done to create an

oval rather than a circular defect and usually improves the final cosmetic result. While the skin is stretched between the thumb and index finger of the free hand, the biopsy punch is held perpendicular to the lesion. Slight downward pressure is applied to the handle as it is twisted in one direction between the thumb and index finger (i.e., clockwise or counterclockwise) (Fig 2B). This motion moves the biopsy punch through the reticular dermis with ease.

The punch is removed and a core of tissue is elevated gently by piercing it with a needle or grasping it with a forceps, being careful not to crush the tissue. An iris scissors is used to transect the core of tissue at the depth of the specimen (*Fig. 2C*). Hemostasis is best achieved with placement of a single 4-0 or 5-0 nonabsorbable suture and direct pressure.

The fusiform excisional biopsy, the incisional biopsy, and postoperative wound care will be discussed in Part 2 of this review.

Clostridial Gas Gangrene and Septicemia in a Patient with Light Chain Disease

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LOSTRIDIAL SEPTICEMIA is a rare but highly lethal illness due to bacteremic seeding with pathogenic clostridia orginating primarily from the uterus, colon, or biliary tract. Clostridial myonecrosis may give rise to transient bacteremia but is very rarely associated with septicemia and hemolysis. The increased frequency of clostridial infections, particularly Clostridium perfrigenes and Clostridium septicum, in patients with malignancy has been reported.1-5 We report a case of gas gangrene and septicemia caused by C perfrigenes in a patient with lambda light chain disease.

Case Report

A 69-year-old white man was admitted to Broadway Methodist Hospital July 5, 1982, because of low back pain for several months.

Physical examination was essentially unremarkable. No lymphadenopathy or hepatosplenogaly was noted. The hemoglobin level was 12.1 gm/dl and the hematocrit value was 35%. The leukocyte count was 6,100/cu mm with 57% segmented neutrophils, 3% band forms, 33% lymphocytes, and 7% eosinophils.

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Chemistry profile revealed a serum calcium level of 11.1 mg/dl, BUN 38 mg/dl, creatine 3.4 mg/dl, total protein of 6.8 gm/dl and albumin level was 3.4 gm/dl. Chest x-ray showed no abnormality. Lumbar x-ray revealed scattered osteophytes and evidence of degenerative disease at L_5 and S_1 level. The x-ray film of the thoracic spine showed compression of the body of T_5 – T_7 .

Serum protein electrophoresis showed no evidence of monoclonal spike. Serum immunoglobulin quantitation revealed Ig G level of 438 mg/dl, Ig A level of 19 mg/dl and lg M value was 26 mg/dl. However, a monoclonal spike was detected on urine protein electrophoresis and abnormal lambda arcs were detected from both urine and serum by immunoelectrophoresis. The value of 24-hour urine protein was 3.9 gm. A bone marrow aspiration was performed and showed 85% plasma cells which appeared in clusters of sheet and many were immature forms. Diagnosis of lambda light chain disease was established.

The patient was treated with a combined chemotherapy of prednisone, Cytoxan, vincristine and melphalan. He developed leukopenia and his hemoglobin dropped to 7 gm/dl. He received 4 units of packed cells transfusion and he also received palliative radiation therapy to the back. The patient was discharged July 31, 1982.

He was readmitted Oct. 9, 1982, because of severe back pain which could not be relieved by additional radiation therapy. A myelogram was performed and a high degree of partial obstruction at T₁₂ and T₇ was noted. A decompressive laminectomy was performed. The hemoglobin level was 10.2 gm/dl and the leukocyte count was 1,900/cu mm. His postoperative course was uneventful.

On Oct. 25, 1982, he received a second

cycle of the combined chemotherapy for four days. He tolerated the treatment well despite a drop in the leukocyte count to 648/cu mm. On Nov. 2, 1982, he suddenly developed a seizure and went into cardiac arrest. Resuscitation was unsuccessful and the patient died.

At autopsy, the skin was crepitant all over the body. No wound could be found. Gas formation was evident in most of the organs. Liver and brain presented a honeycomb appearance (Fig. 1 and 2). Gas bubbles were seen in the submucosa of the gastrointestinal tract and urinary bladder. Gas bubbles were also noted in the lumen of many blood vessels. Histologic sections demonstrated large gas-filled space in every organ (Fig. 3), and Gram-positive bacilli were noted (Fig. 4). Clostridium perfrigenes was isolated and identified from blood cultures which were obtained at autopsy.

Discussion

Clostridium perfrigenes is widely distributed in nature and resides in the lower intestinal tract of humans as part of normal microbiota. The association of gas gangrene and septicemia due to C perfrigenes with malignancy has been reported in the literature. 1,2,3,6,7 Also, Clostridium septicum infection has been proved to be associated with malignancy in increasing frequency.4 The extreme infrequency of clostridial gas gangrene and septicemia developing from a contaminated minor surface laceration in a healthy individual' suggests an endogenous source of the organism. Thus, though mechanisms remain unclear, the relationships between C perfrigenes or C septicum and malignancy have been established.

It would appear that terminal cancer patients are excellent candidates for



FIGURE 1: Liver shows a spongy appearance.



FIGURE 2: Brain shows a honeycomb appearance.



FIGURE 3: Postmortem gas bubbles found in kidney (original magnification X400).



FIGURE 4: Bacilli, presumably Clostridium perfrigenes, found in liver (original magnification X1,000).

clostridial infection, more so if they are under chemotherapy. From the above it is suggested that clostridial infection should be suspected in all cancer patients in which a sudden change for the worse appears. An immediate clinical diagnosis and energetic treatment are imperative since bacteriological confirmation may take as much or more time than the evolution of the illness. Increased awareness of this association and aggressive treatment may result in improvement in mortality rate.

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Chronic Pain Syndrome: Evaluation and Treatment

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a primary objective of the medical profession throughout time. As early as the 16th century B.C., pharmacological agents for the relief of pain were described in the Ebers, Berlin and Smith papyri. However, it has only been recently, with new developments in the fields of neurology, biochemistry and psychology that this complex phenomenon has begun to yield to understanding.

Pain may be considered from different points of view depending on the situation of the patient and intent of the clinician. This discussion will be limited to chronic pain of a non-malignant origin. When this type of pain is intractable, its etiology can remain obscure, its time course varied and the symptoms can evade most conventional medical treatments.

Most treatment approaches to the problem of chronic pain have been based on a dichotomy between physiological and psychological causes. This dualistic view of the patient greatly reduces the available treatments. It reinforces the tendency to isolate the symptoms from the individual experiencing the pain and to focus treatment on target organs.

Although this dichotomy has not yet been universally ejected, medical science has made significant contributions to the understanding of pain as a subjective, existential experience that is affected by neurological, biochemical, physiological, psychological, and social factors. When it becomes apparent that an organ-based focus is not providing adequate relief so that the patient can return to a productive life, it is a disservice to the patient not to appreciate the complexities of pain.

It has become clear that no single theory adequately describes the entire experience of pain involving sensations, affects and meanings. At every level of central nervous system integration, the nociceptive impulses can be affected by multiple pathways and systems. At the first level, the receptors on the nerve endings which transmit nociceptive impulses are dependent upon the amount of prostaglandin available. In the substantia gelatinosa in the dorsal horn of the spinal cord, Melzack and Wall's gate theory has proposed that firing of peripheral, large fiber afferents inhibits the rostrad transmission of nociceptive impulses.2

More recently, descending tracts have been identified with peptide and sero-tonergic mechanisms that also can inhibit rostrad transmission of nociceptive impulses. 3,4,5,6 At higher levels of integration, pharmacological and lesion studies have shown that both frontal and limbic areas of the brain modify the meaning of, and the emotional reaction to, nociceptive stimulation. 5,8

These physiological findings demonstrate that there is no possible simple correlation between the degree of tissue damage and the degree of suffering and disability that is experienced by the patient.

The Chronic Pain Syndrome Patient

Table 1 lists the basic admission criteria and some common characteristics of the chronic pain syndrome patient. It cannot be totally explained why some persons

can have injury and pain, and yet, continue to function in a reasonably adequate manner, whereas others, with similar degrees of injury and pain, become preoccupied with pain and disability. However, various authors have addressed this problem from different theoretical perspectives

Investigators with a psychodynamic orientation have noted that many chronic pain patients have a history of early abuse or neglect. They have speculated that this situation, and other factors, have led chronic pain syndrome patients to develop masochistic, counterdependent personalities.10 A common finding is that many chronic pain syndrome patients, prior to the time of their injury, spent most of their daily activities in taking care of others, excessive work, and generally avoiding the admission or meeting of their own primary needs. In this sense, after injury, health care providers can become surrogate, "good" parents and the disability provides a socially legitimate way to meet the primary emotional needs of the patients. This in no way suggests that injury and pain is not present but helps to explain why some people are more preoccupied with it than others.

More cognitive-behaviorally oriented theorists have approached the problem as one of learning particular suffering reactions. To these authors the exaggerated pain behavior has been established by both pavlovian and operant conditioning. ^{11,12,13} Fortunately, it is not necessary to choose between these theoretical approaches since they can be viewed as complimentary. A psychodynamic approach is most useful in explaining why certain patients develop the chronic pain syndrome and the behavioral approach in delineating appropriate intervention modes to reduce the pain behaviors.

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One cannot discuss the chronic pain syndrome without examining its relationship to depression. Von Knorring has noted that of patients who presented with depression as the primary diagnosis, 60% also experience some form of pain.14 Singh reported that 65% of a depressed outpatient group presented with a physical complaint. 15 Lindsay and Wycoff found that 87% of the patients referred to a pain center were depressed and that 83% of these had improvement in their pain with the use of antidepressants. 16 Merskey has summarized these data and discussed their implications.17

Aronoff and Evans have reported that doxepin yields particularly favorable results. Evans, in a sample of hospitalized pain patients, found a strong correlation between pre-treatment depression scores and number of requests for analgesics. Aronoff and Evans found that in a sample of 104 chronic pain patients that the initial MMP1 depression score did not correlate with the pain total or pain sensory scores of the McGill-Melzak Pain Questionnaire, but did correlate with the pain affective scores. These authors also found that the depres-

TABLE 1 Basic Admission Criteria

- 1 Significant life disruption due to intractable benign pain
- 2 No further medical or surgical procedures are indicated
- 3 Patient honestly desires to better cope with pain and increase his/her functional capacity

Some common characteristics of Chronic Pain Syndrome patients

- I. On Interview
 - A Multiple, unsatisfactory medical encounters
 - B. Difficult to obtain a good, chronological history. Patient rambles and jumps.
 - C. Anxiety, depression or flat affect
 - D. Social isolation and markedly reduced activities
 - E. Medication dependence
 - F. Early history of abuse or neglect
 - G Passive-aggressive personality with hypochondriasis
 - H. Before injury, a workaholic, counterdependent life style
- II On Examination
 - A Anticipatory fear and excessive response to touch
 - B. Exaggerated pain behavior
 - C. Guarded, tense, tight and splinted
 - D. An inconsistent relation between formal examination and informal. functional observation

TABLE 2 Goals

The program model for the treatment of chronic pain involves a multi-disciplinary, multi-modal, approach including physical, emotional, cognitive and behavioral components.

The program is designed to return the patient to a more active, productive lifestyle through reduction or elimination of the factors maintaining chronic pain and decreased functional capacity by:

- a Increasing physical endurance, strength and flexibility
- b. Increasing overall levels of functional activity
- c. Decreasing the negative psychosocial effects of the pain
- d Increasing pain/stress management skills of the patient.
- e. Decreasing the patient's dependence on medications and the health care system for dealing with chronic pain
- f. Increasing the patient's willingness and self confidence in taking responsibility for health and wellness.
- g Increasing the patient's overall level of satisfaction with life

sion score on the MMPI and on the Profile of Mood States was elevated in most chronic pain patients.

Although the incidents of depression among chronic pain syndrome patients is high, depression is often masked or not readily apparent unless one considers the vegetative signs of depression as well as the dysphoric mood. To find insominia, excessive weight change, fatigue and decreased libido is usual in these patients. However, many patients may protest that they are not depressed and that, indeed their life would be perfect were it not for their pain. This is consistent with the observation of the tendency for emotional denial of unmet dependency needs in this type of patient.

Treatment of the Chronic Pain Syndrome Patient

If a patient with intractable pain is still functioning reasonably well in society, e.g., still is vocationally or avocationally

active, has not drastically reduced the amount of socialization and outside of the home activities and remains active most of the day, a coordinated, outpatient program can be developed which will serve the patient in reducing the impact of the painful sensations.

However, if you have a fully developed chronic pain syndrome patient, in which the major focus of life is pain and disability, with reduced activities, no vocational or avocational interests, most communication, verbal and non-verbal, related to pain and continued doctor shopping, then the patient will probably yield only to an intensive, inpatient program.

Since chronic pain is a multifaceted phenomenon, one must intervene in a multidisciplinary way. Most physicians probably would find that they lack both the time and the interest to become involved in every aspect of the patient's life and introduce those modification techniques necessary to change that life.

The goals of the Rehabilitation Center for Pain of the Community Hospital of Indianapolis are listed in *Table 2*. This center was established in 1974. It is an eight-bed unit staffed by physicians, pharmacists, a chaplain, physical therapists, recreational therapists, social workers, psychologists and especially trained nurses, many of whom have been with the program since it was originated. Approximately 1,000 patients have been treated since the center was opened.

Recently, an intensive effort has been made to analyze the efficacy of comprehensive pain center programs. A recent report by Aronoff and Evans from a unit comparable to our own reported that on the average, for 104 consecutive patients, pain (as assessed by the McGill-Melzack Pain Questionnaire) was reduced by 46% and mood improved by 92% (as assessed by the Profile of Mood States). On a scale of 0-4, the staff rated patient improvement as 2.2 and the patients rated improvement as 2.8.20

In a recent review of outcome studies from comprehensive pain centers, 24 different investigations were reported.²¹ The studies encompassed periods of one year to five years after discharge from the program. The findings, judged by such criteria as increased vocational and avocational activities, decreased down time duc to the pain, decreased use of narcotic and tranquilizer medications, decreased utilization of the health care system, and increased socialization and exercise, revealed that between 60-75% of patients markedly benefitted from the treatment programs.

A study conducted in 1980 by Blue Cross-Blue Shield of Indiana in collaboration with the Rehabilitation Center for Pain of Community Hospital of Indianapolis demonstrated a cost effective reduction in patient use of the health care system by comparing a period of two years before and two years after a pain center program.²²

Conclusion

The chronic pain syndrome patient can be a cause of immense frustration, guilt and anger for some physicians. It is confusing and frustrating when one has done that which is appropriate medically and surgically for a patient and yet the patient remains in pain. Since we are human, there is a tendency in these cases to blame the patient. This hostility is picked up by the patient who, in turn, becomes angry with us. The patient believes that we think "the pain is all in his head." At the same time, we see that the condition is destroying quality of the patient's life. Yet, we are at a loss to know what to do about the situation. Hopefully, this brief discussion makes slightly clearer the complex nature of this phenomenon and offers the hope that effective treatment of the chronic pain syndrome patient is possible.

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CME QUIZ-

TO OBTAIN ONE HOUR OF CATEGORY 1 AMA CME CREDIT, answer the following questions by circling the correct answer on the answer sheet below. Complete and clip the application form and mail it to: Indiana University School of Medicine, CME Division, Fesler Hall 224, 1120 South Dr., Indianapolis 46223.

Total Parenteral Nutrition

CONTINUED FROM PAGES 359-365

- Acute starvation caused by disease, stress or injury results in an early catabolic state. During the first 24 hours, if no calories are provided, the body will derive its fuel source from:
 - a. glucose produced via breakdown of muscle and hepatic glycogen stores.
 - circulating glucose plus gluconeogenesis of catabolized proteins and amino acids.
 - c. ketones mobilized from triglyceride stores.
 - d. ketones from triglyceride stores plus glucose derived from gluconeogenesis.
- Malnutrition caused by catabolic events associated with disease and stress can be detected by using readily available tests to assess:
 - a. the body's fat stores.
 - b. muscle and hepatic glycogen levels.
 - c. oxygen consumption and CO₂ production (indirect calorimetry).
- d. somatic and visceral protein stores.
- 3. It is known that malnutrition affects both wound healing and the ability of the body

- to fight infection. Therefore, patients being considered for major surgery should be considered for a formal nutritional assessment when:
- a. the patient's weight has been steady for more than a year.
- b. they have lost 10 pounds involuntarily.
- c. they have lost more than 30 pounds involuntarily.
- d. they have lost more than 50 pounds involuntarily.
- 4. Which of the following combinations of non-protein calories and amino acids represents an adequate daily supply for a 70 Kg individual who is moderately depleted and awaiting major extripative surgery for carcinoma of the pancreas?
 - a. 1,000 calories and 50 grams of amino acids.
 - b. 2,000 calories and 70 grams of amino acids.
 - c. 2,800 calories and 105 grams of amino acids.
 - d. 3,500 calories and 350 grams of amino acids.

- e. 7,000 calories and 500 grams of amino acids.
- 5. A 24-year-old woman with Crohn's disease who has been on massive doses of steroids in an attempt to control the process still has voluminous diarrhea. The patient is admitted to the hospital in anticipation of surgical excision of the ileal segment involved with Crohn's disease. Because of her poor nutritional status, intensive parenteral nutritional therapy is begun. She is receiving an adequate regimen of calories, protein and electrolytes. In addition, she is receiving several doses of 10% lipid each week. About one month after beginning her therapy, she manifests an erythematous vesicular rash over the extensor surfaces of her body, as well as around the infraorbital and nasolabial folds. The most likely cause of this rash is:
 - a. essential fatty acid deficiency.
 - b. allergy to one of the solution components.
 - c. steroid replacement.
 - d. zinc deficiency.
 - e. vitamin B deficiency.
- 6. The most common complication following insertion of a subclavian catheter for the purpose of intravenous total parenteral nutrition is:
 - a. brachial plexus injury.
 - b. thrombosis of subclavian vein.
 - c. hemothorax.
 - d. embolization of catheter into heart.
 - e. septicemia by opportunistic organisms.

CONTINUED ON PAGE 402

APRIL CME QUIZ Answers

Following are the answers to the CME quiz that appeared in the April 1984 issue: "Anorexia Nervosa and Bulimia," by Richard N. French Jr., M.D., and Elgan L. Baker, Ph.D.

1.	d	6.	b
2.	С	7.	d
3.	b	8.	d
4.	C	9.	а
5.	d	10.	d

Answer sheet for Quiz: (Parenteral Nutrition . . .)

1. a b c d 6. a b c d e
2. a b c d 7. a b c d e
3. a b c d 8. a b c d e
4. a b c d e
5. a b c d e

I wish to apply for one hour of category 1 AMA Continuing Medical Education credit through the I.U. School of Medicine. I have read the article and answered the quiz on the answer sheet above. I understand that my answer sheet will be graded confidentially, at no cost to me, and that notification of my successful completion of the quiz (80% of the questions answered correctly) will be directed to me for my application for the Physician's Recognition Award of the American Medical Association. I also understand that if I do not answer 80% of the questions correctly, I will not be advised of my score but the answers will be published in the next issue of Indiana Medicine for my information.

Name (please print or type)		

Address

Identification number (found above your name on mailing label)

Signature

To be eligible for this month's quiz, send your completed, signed application before June 10, 1984 to the address appearing at the top of this page.

Look-Alike and Sound-Alike Drug Names

BENJAMIN TEPLITSKY, R. PH. Brooklyn, N.Y.

Look-alike and sound-alike drug names can be misinterpreted by a nurse reading doctors' orders or by a pharmacist compounding physicians' prescriptions. Such misunderstandings can result in the administration of a drug not intended by the prescriber. Awareness of such look-alike and sound-alike drug names can reduce potential errors.

Category:

Brand Name; Generic Name; Dosage Forms;

Category: Brand Name: Generic Name:

Dosage Forms:

CONSOTUSS

Cough preparation Consotuss, Merrell Dow (combination drug) Liquid

DISOPHROL

Decongestant
Disophrol, Schering
(combination drug)

Tablets

COTUSSIS

Antitussive Cotussis, Merrell Dow (combination drug) Liquid

STILPHOSTROL

Estrogen
Stilphostrol, Dome
Diethylstilbestrol
Diphosphate
Tablets, Injection

Physicians Not Negligent in Care of Patient

Indiana Court Action

A patient's physicians were not negligent in treating him, an Indiana appellate court ruled.

The patient consulted the physician over an 11-year period, beginning in 1962, complaining of pain in his chest and other symptoms. Results of physicial examinations were normal, and the patient did not have a recommended electrocardiogram. An ECG taken at a clinic in 1969 showed no evidence of heart disease. A diagnosis of tension state with hyperventilation syndrome was made, and a psychiatric evaluation was recommended, but the patient did not comply with the recommendation or take a prescribed tranquilizer.

When the patient applied for life insurance in 1973, he developed problems during a stress test, which was stopped. When he contacted a second physician, employed by the same group as his own physician, because of flu-like symptoms, a decongestant that constricts blood vessels was prescribed. About a week after the stress test, the physician discussed the results with the patient,

informing him that they indicated coronary artery disease. The patient denied having chest pains or shortness of breath, although his wife later said that he had complained frequently of severe pains. The physician advised the patient to quit smoking and to report to a hospital or physician immediately if he suffered chest pains. Less than two weeks later, the patient suffered chest pains at work but rested and returned to work. He died shortly thereafter of a heart attack.

The patient's widow brought an action against the physicians and the group employing them, contending that their negligence caused the patient's fatal heart attack. The trial court directed a verdict for the second physician and entered judgment on a jury verdict for the other defendants.

On appeal, the widow contended that the trial court erred in instructing the jury, among other things, to find for the physician if death would have occurred regardless of treatment, that the patient had a duty to provide the physician with complete information and to follow his instructions, and that a physician was not negligent if he exercised reasonable care and ordinary skill even if he did not appreciate the seriousness of a patient's problem. She also alleged error in granting judgment for the second physician at the close of the case.

The appellate court found no error, stating that if death occurred regardless of care provided, there was no causation. The court found that the jury was properly instructed on contributory negligence and that there was evidence in the record both of his failure to follow his physician's instructions and his failure to give complete and accurate information.

The court said that the Indiana Supreme Court had found that a physician's failure to realize the actual seriousness of a condition was not negligence unless facts indicated a lack of skill or care in making an examination and diagnosis. As to the second physician, the court said that even though evidence tended to show that he did not exercise the requisite skill and care, the widow failed to establish that such want of skill or care caused the patient's death. The court affirmed the lower court's judgment.—Fall v. White, 449 N.E.2d 628 (Ind.Ct. of App., June 9, 1983)

Courtesy of The Citation, Feb. 1, 1984.

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EDITORIALS

Drug Therapy for Pain in Terminal Illness

The American College of Physicians has released a statement on drug therapy for pain in terminal illness. The full text was published in the December 1983 issue of *Annals of Internal Medicine*. The recommendations are reproduced below with the permission of the ACP and *Annals of Internal Medicine*:

The goal of drug therapy for severe, chronic pain in terminal illness is to make the patient relatively pain-free. In cases of terminal illness, the ACP contends that sufficient management of pain is more appropriate than aggressive attempts to cure the disease. Both the patient's short-term prognosis and the immediate effects of therapy should be considered in order to free the patient from pain while preserving a maximum level of function.

Oral administration of narcotics (e.g., morphine, methadone) on a regular basis will provide most terminally ill patients with relief from severe, chronic pain and from fear of that pain recurring. The college notes that pain in terminal illness is in general poorly managed due to incomplete knowledge or misuse of what is known. The physician must remain flexible, the ACP maintains, and adjust narcotic dosage, route, and frequency of administration to the needs of the patient.

The ACP further states that there is no clinical evidence that the availability of heroin will improve the drug therapy provided for the severe, chronic pain of ter-

FILM

"Claims he's got the 'Miracle Drug' for financial planning."

minal illness. The narcotics currently available to the physician are sufficient when given properly to provide terminally ill patients with relief from severe, chronic pain. Drugs such as aspirin and acetominophen may be used in combination with narcotics to enhance relief and to reduce the doses required for effective pain control.

Fear that patients will become dependent on drugs has limited the effective use of morphine and other narcotics. The ACP posits that such a fear is unfounded, as dependence is of little consequence in the context of terminal illness. Studies show a marked lack of narcotics abuse in cancer patients, and indicate that a variety of conditions other than drug use alone are contributing factors to addiction. The college thus feels that it is important that narcotics be administered according to each patient's need, and that patients have access to necessary therapeutic narcotics.

The ACP accepts its responsibility to improve the internist's knowledge base of narcotic therapeutics and drug therapy for severe, chronic pain in terminal illness. Physicians must be knowledgeable about pain—its causes, complications, and treatments—in order that terminally ill patients might live the remainder of their lives as productively as possible, says the college.

The ACP supports expanded research in the field of narcotic therapeutics. Though much has been learned about the causes of pain and the most effective ways to manage it, there is much that is yet unknown. Guidelines of care are best based on controlled observations of therapies; thus, the college concludes, continued research is needed about both new and conventional treatments.

The Simple Life

Guest Editorial

Recently I was part of a mixed adult group watching an episode of the TV show *Dallas*; the various characters were going through their usual exciting (?) BORING (?) contorted lives. No one seemed to be paying too much attention to the tube, but apropos nothing in particular, one person commented "I'm glad that I have kept my life simple."

As I pondered my friend's comment, and the miserable unhappy lives portrayed on the screen, there seemed to be something quite ironic about it all. The screen portrayed people rich in monetary wealth, swimming in alcoholic beverages, driving expensive cars, and enthusiastically playing their games of "musical beds"—and thoroughly not enjoying the misery of it all! There was not a happy or contented character in the lot!

As I look around the real world and the people who live in it, including the people I see in my office, I find a great correlation between excess boozing, tomcatting, and misery, and likewise a co-relationship between the simple, contented life not complicated by excess boozing and musical beds.

I will not try to say whether the miserable life leads to the boozing and tom-catting, or whether the boozing and tom-catting leads to the miserable life. I have observed that the folks leading the simple life seem to be leading the "better" and more fulfilling lives.—L. A. Arata, M.D., Shelbyville

Why Indianapolis?

Guest Editorial

The following article (edited slightly for the sake of brevity) was published as the "Director's Corner" in the Sports Medicine Bulletin, January 1984. It was prepared by Mr. John Miller, executive director, American College of Sports Medicine. Reprinted with permission.

Why the American College of Sports Medicine chose Indianapolis as the home for its National Center and the long-term effect that decision will have on its future deserves some attention.

Because I was not involved in the discussions leading up to the decision to leave Madison I will not try to read minds about that decision. The board of trustees studied the options available to the college and decided that the interests of all of you could be best served if the National Center was located in another city.

Once that decision was made, the search for a new home started. This search process was not an easy one. All of the cities that were considered had very positive things to offer.

Indianapolis was finally chosen

because of a unique partnership that produced a series of incentives which your board could not turn down . . . the classic, "make him an offer he can't refuse." Many people point to the very generous contributions from the Lilly Endowment, the Krannert Charitable Trust and the Stokely Foundation as the key elements attracting the college to Indianapolis.

While those contributions are important, they are only part of the unique partnership that is Indianapolis. The city of Indianapolis itself is another important partner in the offer to bring the college from Madison. The city administration is firmly committed to becoming a major center for amateur sports, sports medicine, health and nutrition. That commitment has been expressed by a willingness to go beyond what many people would consider reasonable to ensure that organizations, such as the college, find Indianapolis a good place to be. Because of its concern for both its residents and for the college, the city's contribution to the college has gone far beyond what was originally anticipated. It is difficult to imagine this additional commitment occurring in many cities.

There is a third partner in this consortium that brought the college to Indianapolis. That partner is the business community that surrounds us. This business community is perhaps one of the most exciting things about the city. There is an aggressive sense of commitment to making Indianapolis thrive.

The present drive to make Indianapolis a center for amateur sports, sports medicine, health and nutrition is being fueled by the active participation of business leaders. The entire community was involved in the 1982 National Sports Festival which would not have happened without the active participation at all levels by the business community.

A new Mini National Sports Festival just for Indiana residents has been developed. The "White River Park State Games" brings competitors from all over Indiana to Indianapolis for two days of athletic competition. Much of the planning and manpower to make these games possible is provided by volunteers from the business community.

This community partnership has created a pulse that just about everyone

who spends time in the city can sense. Long time residents and new "immigrants" are sharing in a process that is shaping the future of the twelfth largest city in the country.

Well, if Indianapolis is such a great place to be, who else is there? What other organizations have chosen to make Indianapolis their home? The list of sports and fitness related organizations choosing to call Indianapolis home is impressive. These include the AAU, the Athletic Congress, United States Diving Inc., United States Gymnastics Federation, United States Synchronized Swimming, United States Fitness Foundation and the United States Army Physical Fitness Program, and most recently the Council for National Cooperation in Aquatics. The newly created International Institute of Sports Science and Medicine has also chosen Indianapolis as its home.

Surrounding Indianapolis are some truly outstanding academic institutions that provide teaching and research opportunities for many college members. In addition to the facilities at I.U. School of Medicine, within an hour's drive you can be on the campus of Indiana University, Ball State University, and Purdue University. Within the city itself are the campuses of Indiana University-Purdue University at Indianapolis, Butler University and Indiana Central University.

While other cities may offer some of the benefits and resources that Indianapolis has, it is the pulling together of all of these resources into one package that has made Indianapolis unique.

Question—why Indianapolis? Answer—for all of the above.

STRESS!

Gleanings from Retirement

We hear and read so much about "stress" nowadays, 99 44/100% of it with a negative or pessimistic stant. I think the word has been given a bad name, because there *are* forms of stress which can and do result in a beneficial outcome.

For instance, we often speak of military training, especially "boot camp," as "separating the men from the boys." Please to remember that the means used

to accomplish this is *stress*, both physical and psychological, the one being as important as the other.

Psychological stress is probably the predominant factor in feats of heroism, as witness the classic example of Ulysses who feigned madness to evade joining in the Trojan War, and although king, he spent his days plowing. Just imagine the stress applied by his associates when they placed his infant son ahead of the plow. We all know the outcome: A great hero was stirred to action.

Some form of stress lies behind all sustained and difficult action. Without it the action would not be sustained. We would still be floundering in ignorance and in worse savagery than we see now. Inspiration itself is a form of stress and so is the instinct for self-preservation.

It would be well to point out that the results of stress depend on how we react to it; that it does separate the men from the boys and the women from the girls; and that it should not become an easy excuse for failure. Where would we be now if our national heroes had not stood up to difficulties against tremendous odds throughout our history? And that includes doughboys as well as generals.

Aesop, in his mild but incisive manner, emphasized the result of dodging stress instead of standing up to it in his tale about the ants and the grasshoppers. It might help if we could see a few such fables on television.—A. W. Cavins, M.D., Terre Haute



"This is your last chance to be the richest doctor in town."

The High Cost of Economic Illiteracy

Commentary

RABPEN AND PAPER. It is time for a pop quiz. After subtracting federal, state and local taxes, how much profit do you think the average manufacturing company earns as a percentage of sales? If a company sells \$1 worth of goods or services is the aftertax profit: 50 cents; 20 cents; 5 cents?

Now, the same questions for oil companies, auto manufacturers, electric utilities and insurance companies.

Okay, hand in your papers and compare your estimates with the answers given in a recent poll by Opinion Research Corporation, which asked the same questions. And then let's compare those poll results with the facts.

The over 1,000 adults responding to the telephone poll guessed that the average manufacturer earns 37% after-tax profit on each dollar of sales. In reality after-tax profits are roughly one-tenth of that figure.

Those questioned believed that the big oil companies must be pulling down the big bucks. They guessed the average aftertax profits for oil companies at 60% of sales. Ralph Nader's histrionics notwithstanding, the true figure is 4.3%. (Oil company stockholders wish that Ralph Nader was right on this one.)

The auto industry? Poll respondents guessed their profits at 41% of sales. Detroit, I'm sure, appreciates this vote of confidence, but automakers actually lost money last year.

The gong also sounds for our 1,000 poll respondents who guessed that electric utilities are racking up profits of 48% of sales. They earned 11.2%. The guess of 55% profits for insurance companies was off by a factor of eight. Insurance company profits were 7% of sales.

The gap between perception and real-

RICHARD L. LESHER
President
U.S. Chamber of Commerce

ity of corporate profit levels raises three questions. How did this misperception arise? Should we be concerned by it? And, if we are concerned, what can we do to correct it?

Addressing the second question first, the answer is a resounding yes. We should be alarmed at this shocking level of economic illiteracy, for bad information leads to bad economic policy. It is a lot easier for politicans to rail against the "obscene profits" of oil companies and demand higher taxes if the voters believe that present profits are 60% of sales. A tax hike of 10% of sales would sound reasonable, when in reality it would wipe out the profits of the oil companies and drive them into bankruptcy. The same scenario holds for other industries.

Why are we so misinformed about business profits? I would suggest two contributing factors. Both politicians and union leaders find it to their advantage to exaggerate profit levels and can often be found in front of television cameras pushing untrue, yet headline-making statements.

Too often politicians look at business not as the engine of economic growth but as the vulnerable target for new taxes. Overstating profits makes such tax hikes popular. Union leaders couple demands for higher wage increases with feigned outrage about unconscionable high profits. You have plenty of money, the argument runs, give us some of it. Recently the chickens have come to roost for those

union bosses in the auto and steel industries as they were just beginning to learn that low levels of earning lead not to higher pay for workers but to plant closings and fewer jobs.

Businessmen and women must also shoulder some of the responsibility for these exaggerated estimates of corporate profits. Too often, they highlight the dramatic growth of profits during a recovery, boasting that earnings are up, say 400%, without explaining that this growth is based on depressed earnings during a recession. Understandably, most companies downplay falling profits and

Lastly, we come to the question of what the business community can do to bring down the high level of misinformation on corporate earnings. I am not going to recommend some expensive education campaign at this point, but rather suggest some small steps that businessmen and women can take.

Start with your own family. If the more than 16 million Americans who run businesses on a full-time or part-time basis simply discussed the economic facts of life with their children over dinner, the ignorance level would drop sharply overnight.

Schools could invite local businessmen and women into the classrooms to discuss the role and size of profits in the business world. Businessmen and women could also reach out to civic groups, church groups or sit down with their congressmen when they visit the district.

Small steps, but important.

The debate over economic policy affects the future of all Americans and we cannot allow this debate to continue surrounded by the amount of misinformation revealed in this recent poll.

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BRIEF SUMMARY PROCARDIA

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Increased Angina Oricas onal patients have developed well documented increased frequency duration in everity if angina in plating PROCARDIA or at the time of dosage increases. The mechanism of this respinise into established but could result from decreased coronary perfusion as in lated with decreased distinct pressure with increased heart rate or from increased demand resulting from in reased heart rate or one.

Beta Blocker Withdrawal Patients recently withdrawn from beta blockers may develop a with Javawa in identify the calector.

Detail Dicker Willindrawal. Patients recently withdrawn from beta blockers may develop a with-hawally driving with it reased and halp probably related to increased sensitivity to catechologing ones instantion of PROLARDIA treatment will not prevent this occurrence and might be expected. Lexacerbate if by priving reflex, atechologing release. There have been occasional reports of creased and halp and lefting of beta biother withdrawal and PROCARDIA initiation. It is important in taper beta biothers. I possible rather than stopping them abruptly before beginning PROCARDIA.

Congestive Heart Failure: Rarely, patients, usually receiving a beta blocker have developed heart to use after beginning PROCARDIA. Patients with hight porticisienosis may be at greater risk for

PRECAUTIONS General Hypotension Because PROCARDIA decreases peripheral vascular

PRECADITIONS General Hypotension Because PROCARDIA decreases peripheral vascular results a careful main turing. The indipressure during the initial administration and titration of PROLARDIA is upgested. Tinse observation is especially recommended for patients already taking medication, that reservation is especially recommended for patients already taking medication, that reservation is especially recommended for patients already having the discretization of the patients already and the patients and with a trenativasion. Peripheral edema. Mind to moderate peripheral edema, trypically associated with arterial vasor ather extraction that the patients whose angina is complicated by congestive heart failure care should be taken. Therefore, with the peripheral edema from the effects of increasing, et ventricular dystunction. Orug interactions Beha addrenergic blocking agents. Is see indications and Warnings. Experience given 18th patients and non-comparative crinical train has shown that concommant administration of PROCARDIA and beha bio iking agents. Is usually we folerated but there have been occasional herature reports suggesting that the combination may increase the ikielinood of congestive heart failure, exercise hypotension or exacerbation of angina.

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iterature. HOW SUPPLIED Each ir a ge soft gelatin PROCARDIA CAPSULE contains 10 mg of interdiprine. PROLARDIA APSULES are supplied in bottles of 100 in NDC 0069-2600-661-300 in NDC 0069-2600-2601. And unit dose illoxifolin NDC 0069-2600-41. The capsules should be protected from griff and most stream stored at controlled room temperature 59- to 7.7. Fig. 10-25. Clinithe manufacturer in ginal container.

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*Procardia is indicated for the management of:

1) Confirmed vasospastic angina.

2) Angina where the clinical presentation suggests a possible

vasospastic component.

3) Chronic stable angina without evidence of vasospasm in patients who remain symptomatic despite adequate doses of beta blockers and/or nitrates or who cannot tolerate these agents. In chronic stable angina (effort-associated angina) PROCARDIA has been effective in controlled trials of up to eight weeks' duration in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness and evaluation of long-term safety in these patients are incomplete.



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19th Century Medicine in Indiana

An 1870 Clinical Report of an Inspired Foreign Body

RONALD D. GREENWOOD, M.D. Sacramento, Calif.



TA TIME when throat mirrors sold for a dollar, ophthalmoscopes for five dollars and stethescopes for seven dollars, the *Indiana Journal of Medicine*, first published in May 1870, sold for \$1.50 per year.

The *Journal* was printed in Indianapolis and edited by T. M. Stevens, W. B. Fletcher* and Guide Bell. Fletcher was professor of physiology at the Indiana Medical College as well as a private practitioner.

An 1871 issue of the *Journal* featured the clinical story of one of Dr. Fletcher's patients. Fletcher's report, "Foreign Body in the Air Passage," is of impor-

tance both for its careful clinical description and for its picture of practice more than a hundred years ago.

Dr. Fletcher explained that, in August 1870, he was called to see a three-year-old child who, according to the mother, "has swallowed a watermelon seed down his windpipe."

"The child at the time of my visit was playing and exhibited little disturbance except an occasional quick cough, reminding one of spasmodic croup. I thought the parents mistaken and gave no medicine, leaving the little fellow laughing and talking as usual, but I noticed a slight metallic ring to his voice.

"During September and October I was consulted frequently in regard to his cough. It would come on at night with dyspnea, and bloody froth would pour from his mouth, followed by prostration and slight asphyxia. Except for these occasional troubles, his health was remarkably good.

"Finally, on March 15, 1871, seven

months from my first visit, he was seized with a paroxysm of coughing, in the afternoon, and expelled a large watermelon seed, throwing it half way across the room.

"The seed was unchanged in form or substance except bleached a little.

"We believe this case of interest, not as relates to treatment, for there was no treatment, but to show . . . that patients when left to nature, frequently recover from those accidents, and that as a rule, the result is better than where serious operations are performed to dislodge the foreign substance."

* * 7

Do not fear that you are entering upon a profession whose field of observation and discovery is already wholly occupied. There is ample room for the exercise of all your talent and all your industry in urging forward the case of progress in the science and art of medicine.—Professor Dougan Clark in his address to the graduating class, Indiana Medical College, 1871.

The author is an associate professor of pediatrics and chief, Division of Pediatric Cardiology, School of Medicine, University of California Davis Medical Center, 4301 X St., Sacramento 95817.

^{*}William B. Fletcher, M.D., born in Indianapolis in 1837, helped found the Indiana Medical College in 1869.

Indiana's Medical Malpractice Act: The Medical Review Panel

EDWARD SQUIER NEAL Indianapolis

PRIOR TO FILING SUIT in a court of law, an "aggrieved" patient ("claimant") must commence a proceeding under the medical review panel phase of Indiana's Medical Malpractice Act ("Act"). What are the mechanics and consequences of that proceeding? A review follows.

When a Claimant Files

Before a claimant may commence a lawsuit, he/she must file a copy of the proposed complaint with the Indiana Department of Insurance. The Indiana Insurance Commissioner has been given the responsibility of maintaining the records and data regarding malpractice claims: He has no official duty in the mechanics of the claim.

When the claim is received, the Insurance Commissioner notifies the individuals against whom the claim is filed and his/their insurance carriers. Thereafter, efforts to discover the nature of the claim and relevant evidence are undertaken. At some point, counsel for the litigants select a medical review panel to screen and review the claim.

The Panel and its Selection

The Medical Review Panel consists of an attorney-chairman and three physician-members. The chairman does not ex-

The author is a member of the Indianapolis Bar Association and the Medical-Legal Joint Committee of the Marion County Medical Society.

Reprinted with permission from The Marion County Medical Society Bulletin, October 1983.

Editor's Note: Recently members of a medical speciality through the state received a letter from an attorney expressing frustration in the panel selection process. The letter explained that the panel chairman was unable to find panel memers because many local physicians of the same specialty as the defendant physician were reluctant to serve on the panel. The attorney requested the cooperation of the specialists in forming the panel.

The purpose of reprinting the following article is to explain the panel process. Several points raised by the above-referenced letter should be addressed. First, it is not uncommon for review panels to be composed of physicians from counties outside the locale where the claim arose. Second, the Act states that if the parties cannot agree on panel membership,

the panel chairman *shall* make the selection. Third, the Act states: "All health care providers in this state, whether in the teaching profession or otherwise, who hold a license to practice in their profession, *shall* be available for selection." A panelist shall serve unless the parties, by agreement, excuse him/her or the panel chairman excuses him/her for good cause.

The frustration evidenced in the letter appears to have arisen from an incomplete understanding of the mechanics of panel selection, the fact that practitioners from distant communities may be selected (and *shall* serve), and a misunderstanding of the responsibilities and obligations imposed by the Act on panel members, the panel chairman, and the parties. The panel process works, if its dictates and spirit are followed.

press an opinion concerning the claim, but chairs the panel, rules upon evidence and performs other housekeeping duties. He/she is selected by agreement of the litigants, or from a list of five attorneys drawn by the Clerk of the Supreme and Appellate Courts from which the litigants make alternative strikes. When more than one physician and/or hospital has been named (denominated as healthcare providers), the healthcare providers act as one.

Claimant and healthcare provider each nominate a healthcare provider to serve on the panel. A nominee may be challenged. If so, a second nominee is submitted. If challenge is made to the second nominee, the chairman prepares a list of three names from which claimant and healthcare provider each strike one name. The remaining individual serves. The two physician-members selected by claimant and healthcare provider select the third

panel member.

The Act provides that where only one specialty (other than a hospital) has been named as a defendant, two of the three panel members must be of the same specialty. Customarily, litigants strive to have physicians of the same specialty as the defendant on the panel to aid in the panel review.

Once the third physician-member has been selected, the panel has one hundred eighty (180) days in which to render its opinion. Claimant and healthcare provider submit evidence in written form only. The evidence may consist of medical records, treatises, narrative statements, statements taken under oath, photographs or affidavits. The panel may request and receive such other documentary evidence as it deems appropriate for review.

Panel members can review the submitted evidence independently and confer on



the telephone, or they can meet to deliberate and arrive at an opinion. The chairman decides the panel's method of deliberation. The panel's opinion is in the form of one or more conclusions: (I) the evidence supports the conclusion that the healthcare providers failed to comply with the appropriate standard of care (malpractice); (2) the evidence does not support the conclusion . . . (no malpractice); (3) there is a material issue of fact not requiring an expert opinion; and (4) the conduct complained of was or was not a factor of the resultant damages. Opin-

ion no. 3 concerns matters that do not require expert assessment. For instance, while it may have been appropriate to order a particular medication IV, the claimant's contention is that she never received the injection and thus was injured. The panel would not render an opinion on the issue whether claimant received the injection.

Panel Expenses

Healthcare providers who serve are entitled to compensation at the rate of twenty-five (\$25.00) dollars per diem, not

to exceed two hundred fifty (\$250.00) dollars, plus reasonable travel expenses.

Expert Witness at Trial

The opinion of the panel is admissible at trial. In addition, claimant or health-care provider may request that a panel member testify at trial. If requested, the member must appear and testify. The litigant requesting a member should compensate the witness as any other expert, and arrangements for fees should be made in advance of the in-court appearance date.

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PAUL HARVEY: The Art of Medicine

World famous commentator Paul Harvey championed the family practice specialty in his radio, television and newspaper commentaries in the days following his keynote address at the 1983 meeting of the American Academy of Family Physicians in Miami Beach, Fla., last fall. The following commentary formed the basis of one of Mr. Harvey's October broadcasts.

HE PRACTICE OF MEDICINE is an art. It is being taught as a science. Doctors used to choose a career in medicine because they loved it. Now, the practice of medicine tends to choose doctors. Not because they love it, nor for their empathy nor for their intuition the tap-roots of physicianhood—but for their grade average in biology, chemistry and math.

The med schools get the academic creme de la creme. And thus they tend, with notable exceptions, to graduate the scholar most proficient at reading a spectograph who may be least gifted at determining "why does it hurt."

If you will allow a crudity to make what I consider a significant point, frequently the difference between an "A" and an "A-plus" is a brown nose; a conman proficient at conning his professors.

Reprinted with permission from the November 1983 issue of AAFP Reporter, Kansas City, Mo., and Paul Harvey News, Chicago.



Paul Harvey

And that is a vulgar way to choose a candidate for the healing art.

Medicine is an art. It is being taught as a science.

This indictment applies less to the socalled "family doctor," the general practice physician.

The specialist in family practice, personally acquainted with Uncle Ed and Aunt Fanny, brings to the healing art another dimension: Intuition? Insight? I can't define it but I know it when I see it.

I saw a lot of it recently in Miami Beach where I addressed the American Academy of Family Physicians. That academy is now the largest of all medical specialty

This specialty shares most of the problems of the others, plus one.

Government repayment for medical services favors urban areas and favors the "more mechanized" specialties. The third-party payment screen mercilessly shortchanges the family physician.

And the family doctor also has a further obligation which is singularly his: His love transcends science.

He recognizes Aunt Fanny's physical and emotional responses before they are chartable. He reads his own gut.

And this begets patient "trust" which is far and away the most effective of all placebos.

Maybe someday there will be an added requisite for med school acceptance. Presently, I would not know how to measure it.

Meanwhile, please, you in whom this singular gift resides, resist, even at cost, the overload, the cynicism, the distractions which can turn your patients' names into bloodless dots on an outer-office computer.

So much for a layman's perhaps presumptuous admonition. Just know, doctor, it was spawned of respect and admiration and some terror at the thought of you ever being less than you are.

RELIEF FOR YOUR PATIENTS WITH BACK AND NECK PAIN

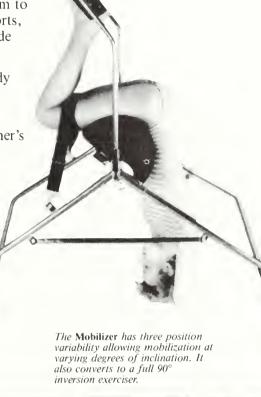
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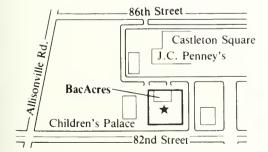
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AUXILIARY REPORT

Judy Koontz (Mrs. James A.) President, ISMA Auxiliary

The Indiana State Medical Auxiliary is alive and well. I feel very proud and honored to represent the auxiliary as their president this year. Thank you for allowing us to use this page to communicate with your members and ours.

The county auxiliaries are involved in many projects. A state-wide auxiliary health project called "An Early Start to Good Health," AMA-ERF fund raising, scholarships for students in health-related areas, health fairs, infant carseat loan programs, and drunk driving and child abuse awareness programs head the long list of activities pursued by your spouses. Many of the projects are carried out in a coalition with other organizations so as not to duplicate services.

I would like for you to encourage your spouses to organize an auxiliary in your county if there is none at this time. The auxiliary can be a very valuable helpmate to medical societies by assisting with implementation of their programs. Medical families share common goals and interests. Auxiliary participation provides your spouse with opportunities for companionship, community voluntarism, and a better understanding of what's happening in this time of change for the medical profession. If your group or your spouse's group would like to know more

about the auxiliary, please contact us through Rosanna Iler at the ISMA office in Indianapolis. We would be happy to share our enthusiasm with you.

Rainbows will be lingering over Indiana this year as a symbol of our hope for a

Welcome

INDIANA MEDICINE welcomes Judy Koontz as the 57th president of the ISMA Auxiliary.

Judy, a past president of the Knox County Medical Auxiliary, is from Vincennes where her husband, Dr. James Koontz, a psychiatrist, is director of the Comprehensive Community Mental Health Center. They have two sons, Rob, 15, and Patrick, 11.

Judy has been a member of the ISMA Auxiliary board of directors for the past five years. She helped plan area workshops for county auxiliary leaders for three years, and she has represented the Auxiliary on various ISMA commissions.

Judy, an R.N. who was graduated in I965 from the Marion County General Hospital School of Nursing, is currently active with the Vincennes Elks' Ladies Golf Association and the Red Cross Bloodmobile program.

bright and sunny future for the Auxiliary. This year's theme is "Make Someone Happy By Caring and Sharing."

In June many of us will be attending our national convention to learn, to share ideas, and to vote on issues that affect our auxiliary work. A Leadership Conference will be sponsored by the ISMA Auxiliary for the county leaders in September. October will find nine of our county presidents-elect at AMA's Leadership Confluence. Plans are now under way for the spouses' activities including an open board meeting and luncheon on Sunday at the ISMA Convention in October. Won't you invite your spouse to join you for the fall convention in Indianapolis? April 1985 will call us to Vincennes for our annual House of Delegates. All these functions will be sandwiched between hundreds of county auxiliary activities.

We are a dedicated group and proud of our achievements. We thank you for your assistance in helping us to reach our goals. We are always ready and willing to assist the ISMA in joint efforts relating to legislation, health issues, and public relations. You, as our spouses, are a most important part of our lives. Thank you for caring and sharing your life's work with us. We want to be involved and to be an active, participating auxiliary.

INDIANA STATE MEDICAL ASSOCIATION AUXILIARY Executive Committee

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AN ESTIMATED 125 Indiana physicians listen as Dr. Felix Millan (podium), an East Chicago physical medicine and rehabilitation specialist, discusses the "Establishment and Public Relations of a Local Impaired Physicians Committee."

Help for 'Impaired' Physicians



ATTORNEY Robert J. Shula of Indianapolis lunches with physicians after discussing "Indiana Law Regarding Confidentiality and Immunity."

A statewide seminar conducted this spring was "a major first step toward building a structure giving impaired physicians a way to cope with their problems," declared Dr. Larry M. Davis, a psychiatrist serving as chairman of the ISMA Commission on Physician Impairment.

About 125 Indiana physicians attended the day-long seminar in Indianapolis March 17. Local and national speakers provided specific guidance for county medical societies and hospitals in establishing formal committees to identify impaired physicians, confront them, and then assist in treatment, rehabilitation, and eventual re-entry into responsible practice.

The highlight of what Dr. Davis calls "a positive, upbeat approach" to taking corrective action in cases of physician impairment is recognition by the Indiana Medical Licensing Board of the potential effectiveness of impaired physician committees at the local level.

In its "Standards of Professional Conduct and Competent Practice of Medicine," adopted Feb. 23, 1984, the Licensing Board said that a physician who voluntarily submits to treatment for various forms of impairment—treatment supervised by an impaired physician committee—shall be exempt from reporting to a peer review committee or to the Medical Licensing Board as long as his progress is satisfactory.



DR. WILLIAM J. RIAL (left), the AMA's immediate past president and keynote speaker, is joined by (I to r) Dr. Davis; Mr. Shula; Dr. Maxwell N. Weisman, a Baltimore psychiatrist who discussed "The Nature of Impairment by Substance Abuse"; Dr. George T. Lukemeyer, ISMA president who presented the opening remarks; and Dr. David I. Canavan, medical director of the Impaired Physician Program operated by the Medical Society of New Jersey.



DR. LARRY M. DAVIS (right), chairman of the ISMA Commission on Physician Impairment, leads a small group discussion after viewing videotapes on "The Art of Confrontation."

Photos by Ralph Anderson and Karyl Hancock



DR. THOMAS E. LUNSFORD, Indianapolis neurologist and Commission member, discusses "Reentry and Follow-up Monitoring."



DR. THOMAS E. MORAN, Indianapolis family physician and Commission member, discusses "Treatment—Alternatives."



DR. BRYCE B. ROHRER, Walkerton family physician and Commission member, discusses "Identification and Confrontation."



CONFEREES examine the new "ISMA Impaired Physician Handbook," a threering binder that can be purchased through ISMA headquarters.



ISMA PHYSICIANS, hospital administrators and guests enjoy lunch during an all-day seminar on physician impairment, held in March at the Indianapolis Marriott Inn. Among those on hand (above) was Robert Griffin, D.D.S. (second from right), who serves on the ISMA Commission on Physician Impairment, representing the Indiana Dental Association. Also attending (below) was Dr. George H. Rawls (center foreground), representing the Indiana Medical Licensing Board.





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1984 LEGISLATIVE SUMMARY

ROB CLARK Indianapolis

The following is a summary of healthrelated measures signed into law during the 104th session of the Indiana General Assembly. Copies of these bills, as enacted, can be obtained through the county clerk's office in your county seat or through the ISMA office.

H.B. 1291 (P.L. 105)-Medical Malpractice Act (Effective immediately and 9/11 '84): This bill raises the Indiana Patient's Compensation Fund surcharge from 25% to 50% of the premium charged to all covered providers. This bill also provides for the transfer to the Patient's Compensation Fund of any excess reserves being held as of May 1, 1984 by the Indiana Residual Malpractice Insurance Authority (IRMIA). Such a transfer will occur if an independent actuarial study is undertaken to certify that excess reserves exist and that the transfer of these reserves would not diminish the purposes for which the IRMIA was established. The need for a surcharge increase became apparent after \$10.5 million in judgments were paid from the PCF in December 1983, leaving a \$1.3 million balance and an additional 16 claims against the Fund which had to be deferred for payment.

The author is the 1984 legislative intern for ISMA legal counsel. He is a graduate student in health administration at Indiana University, Indianapolis.

Senate Concurrent Resolution 70 (To be voted on by the Legislative Council): This resolution attempts to create a study committee on changes to the Medical Malpractice Act of 1975, with the Governor selecting the chairman and secretary and with the membership including four legislators, two lawyers, the Insurance Commissioner, two physicians, one representative from the Indiana Hospital Association and two members of the general public not associated with the hospital or insurance industries. This resolution was passed by the full Senate; however, to be put into effect, it must be adopted by the Legislative Council.

S.B. 411 (P.L. 97)—Hospital Medical Staffs/Secretary of the State Board of Health Appointment (Commissioner) (Effective 9/11/84): This bill adds a new requirement to the existing law and establishes hospital governing boards as the supreme authority for the management of the hospital in making appointments to the medical staff and assignment of privileges. This new requirement includes the following provisions: (a) the submission of proof that a medical staff member has qualified under the Indiana Medical Malpractice Act as a health care provider; (b) the performance of patient care and related duties in a manner that is not disruptive to the delivery of quality medical care in the hospital setting; and (c) standards of quality medical care which recognize the efficient utilization of hospital resources, and established and developed by the medical staff.

S.B. 411 also places with the Governor the authority to appoint the Secretary (Commissioner) of the State Board of Health (ISBH). This portion of the bill makes the Secretary of the ISBH the Governor's appointee. Previously, members of the Executive Board of ISBH elected the Secretary. The requirement that the Secretary of the ISBH must hold

an unlimited license to practice medicine still remains in the law.

S.B. 1 (P.L. 102)—Generic Drug Bill (Effective 9/1/84): This bill permits a pharmacist to dispense a lower-priced, generically equivalent drug for the prescribing physician who has indicated a substitution is permissible.

Also, each written prescription issued by a practitioner must have two signature lines printed at the bottom of the prescription form, one of which must be signed by the practitioner for the prescription to be valid. Under the blank line on the left side of the form must be printed the words "Dispense as Written." Under the blank line on the right side of the form must be printed the words "May Substitute." For substitution to occur, the practitioner must sign on the line under which the words "May Substitute" appear. If the practitioner communicates his instructions to the pharmacist orally, the pharmacist shall indicate the instructions in his own handwriting on the written copy of the prescription order.

Finally, the bill states that a pharmacist may substitute a lower-priced, generically equivalent drug product for the prescribed brand name product if: (a) the customer agrees that the pharmacist may select a generically equivalent drug product; (b) the pharmacist believes, based on his professional judgment, that the dispensing of the lower-priced, generically equivalent drug product will not harm the individual for whom the drug is prescribed; and (c) the practitioner has indicated that the pharmacist may substitute a generically equivalent drug product by orally stating that a substitution is permitted or by signing the appropriate line on the prescription form indicating that a substitution is permitted.

The brand name of the prescribed drug product may not be included on the prescription container label unless the drug product is actually dispensed. The pharmacist shall record on the prescription the name of the manufacturer or distributor, or both, of the actual drug product dispensed.

This bill does not require pharmacists to pass on cost "savings" to customers, but they are urged to do so and that is the intent of the legislation.

H.B. 1397 (P.L. 140)—Preferred Provider Organization (Effective 12/31/84): This bill allows insurers to enter into agreements with health care providers relating to charges for services of such providers to deny reimbursement for expenses of services not rendered by a provider. This bill was sponsored by Rep. Walter Roorda, R-DeMotte; William

Roach, D-Terre Haute; Richard McIntyre, R-Bedford; Sen. Joseph Harrison, R-Attica; and Sen. Douglas Hunt, D-South Bend.

H.B. 1349—Postural Defects Annual Testing (Effective 9/1/84): This bill adds a new section to the public health laws concerning the institution and administration of a test to determine postural defects of a student in the fifth, seventh, and ninth grades. The State Board of Health may recommend procedures and guidelines for the administration of this section.

H.B. 1041 (P.L. 158)—Faith Assembly Bill (Effective 6/1/84): This bill repeals Section 17 of Indiana's child abuse law

which states, "Nothing in this (chapter) may be construed to prohibit any religious group from the lawful practice or teaching of its beliefs." The effect of repealing this section is to eliminate the legal argument that certain treatment given to a child was based on religious beliefs and therefore eould not be the subject of a child abuse charge. This bill also makes written reports, photographs and other information in the possession of a county department of public welfare or local child protection service confidential and shall be made available only to those persons authorized. Those authorized include a physician who has before him a ehild whom he reasonably suspects may be a vietim of child abuse or negleet.

BOOK REVIEWS

Prospective Payment: What It Is, How to Cope

Edited and Copyrighted 1983 International Health Services, Ltd., 231 Nashoba Road, Concord, Mass. 01742. 134 pages, softcover, \$10.

The effects of prospective payment are predicted. Interviews were conducted during the summer of 1983 with over 500 hospital executives. Detailed explanations of the interview process with copious graphs are arranged in orderly fashion.

The prognosis is that many hospitals will have serious difficulty complying with the new payment system.

The analysis was done by a blue ribbon team of high officials of the American Hospital Association, with inside and outside legal counsel, with hospital supply representation together with top officials of International Health Services.

The basic problem is meticulously outlined starting with the explosive increase in hospital costs due to Medicare and Medicaid and extending year by year through government response as exemplified by OBRA, TEFRA and DRG.

The analysis is most complete. The effects of DRG system on internal operation, financial management and medical care quality in hospitals is precisely and strictly discussed and graphically illustrated.

Changes in hospital administration in regard to medical staff relationships,

"I wish you'd give up jogging on your lunch hour!"

problems with insurers, cost accounting and medical record keeping are outlined. Also, acquisition of drugs and other supplies, preservation of capital assets, PPOs, HMOs and related methods of medical practice, and the issue of cost switching are thoroughly discussed.

The book is completed by seven appendices with a wealth of data including but not limited to a DRG listing with weighting factors and a glossary of acronyms and terms.

The book has already sold like the proverbial hotcakes. Every hospital should have multiple copies and every member of every medical staff should have a copy at the office and another at home.

A thorough and complete knowledge of all the ins and outs of prospective payment is an absolute necessity if hospitals are to remain financially sound, if quality of medical care is to be maintained, and if physicians are to be free to practice topnotch medicine.

Frank B. Ramsey, M.D. Indianapolis General Surgery

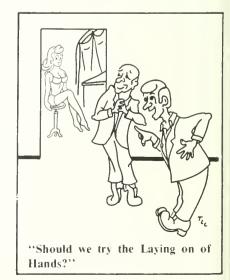
Dover Publications has released Leonardo on the Human Body, a volume of more than 1,200 anatomical drawings on 215 black-and-white plates. Leonardo's text has been translated into English and accompanies the drawings. Kenneth Clark once noted, "It is a miracle that any one man should have observed, read and written down so much in a single lifetime." The plates are described as carefully detailed and accurate in their data, beautiful and vibrant in their technique—the finest anatomical drawings ever made. \$10.95.

Doubleday has published Meetings at the Edge: Dialogues with the Grieving and the Dying, the Healing and the Healed. The author is Stephen Levine, an accomplished writer on this subject. He was a student and a teacher with Elizabeth Kubler-Ross for two years. Kubler-Ross writes: "Stephen's work is magic. His work with the grieving and the dying is amongst the most skillful and compassionate that I am aware of in this country." \$7.95.

Thieme-Stratton announces a new book, Splinting in Hand Therapy. It is written especially for orthopedists, physical therapists and occupational therapists, but is useful to any physician concerned with trauma. The 88-page book sells for \$19.50.

Robert J. Brady Company has three new books. Emergency Pharmacology summarizes side effects, chemistry, compatibilities, administration, etc., in a logical format to allow the clinician to save valuable time in making proper decisions. Prehospital Emergency Pharmacology deals with drugs and medications used in a prehospital setting. Endocrine & Metabolic Emergencies covers proper diagnosis, management and triage of endocrine and metabolic emergencies.

Dell Trade Paperbacks has a new book, Having a Baby. It is a one-of-a-kind book offering support and encouragement to prospective parents. It was written by seven women who formed an exercise group while each of them was pregnant. The exercise group developed into a mutual support group which elaborated such a mass of information, encouragement and comfort that a book was required to record the experience. Pediatrician Dr. Lendon Smith says: "I am delighted with Having a Baby. It is wellwritten, complete and gripping. Pregnant women need other women during this time. They need to share. They need to read this book." \$9.95.



Putting the One Minute Manager to Work

By Kenneth Blanchard, Ph.D., and Robert Lorber, Ph.D. Copyright 1984, William Morrow & Co., Inc., New York. 112 pages, hardcover, \$15.

Putting the One Minute Manager to Work is a successor to the One Minute Manager, published earlier (1982), which took the world by storm.

Putting the One Minute Manager to Work capitalizes on the basic concepts contained in the earlier One Minute Manager and converts them into day-to-day skills by demonstrating how they can be applied in real-life situations. It is common sense management skills put to practical use—the ABC's of management. For these principles to have an impact on workers and their productivity, they must be practiced regularly and consistently, according to the authors.

This book, consisting of approximately 100 pages in large type, provides easy reading and can be found on the best seller stand of most large book stores. It is worth reading as a quick review of basic concepts in personnel management.

Donald F. Foy Indianapolis ISMA Executive Director

Doubleday has released We the Victors by Curtis Bill Pepper. Pepper, an eminent journalist, interviewed 100 former cancer patients at Memorial Sloan-Kettering Cancer Center about how they overcame cancer and how it changed their lives. Five factors were revealed by the interviews, the combination of which may have been the basis or an important element in their cure. 132 pages, \$17.95.

Williams & Wilkins has released *The Breast: An Atlas of Reconstruction*. The most recent surgical methods of reconstruction are built around detailed series of step-by-step illustrations depicting the techniques themselves as well as pre- and post-operative procedures. Commentaries by leading authorities accompany each group of illustrations, with additional discussion provided by the editors. \$75.

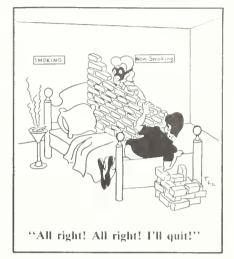
Current Medical Diagnosis & Treatment

Edited by M. A. Krupp, M.D., and M. J. Chatton, M.D. Copyright 1984, Lange Medical Publications, Los Altos, Calif. 1,153 pages, softcover, \$26.

Current Medical Diagnosis & Treatment 1984 is designed to serve as a useful desk reference presenting widely accepted, up-to-date information on diagnosis and treatment. Its mission is not that of a more voluminous textbook of medicine. Nevertheless, in its 1,100-plus pages, it provides for the information needs of most practitioners in most situations.

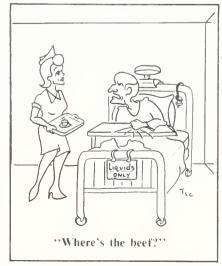
In addition to the distinguished editors, both from the Palo Alto Medical Foundation, it has as authors some 40 distinguished physicians, virtually all from the West Coast. Coverage of recent developments, such as AIDS and Reye's Snydrome (to mention only two) is excellent. Illustrations are minimal but adequate, as is the index. The volume is highly recommended for its stated mission.

W. D. Snively Jr., M.D. Evansville Internal Medicine



Macmillan Publishing announces A Private Practice, written under the pseudonym of Patrick Reilly, M.D., to recount the experience of the author during a 14-year addiction. He also delves into the larger problem of addiction among physicians and describes his road back to normal in a drug rehabilitation hospital. Mutual support by other addicted individuals in the hospital was the main aid for his salvation. 346 pages, \$15.95.

Thieme-Stratton announces the sixth volume of the Current Therapy of Communication Disorders, which covers the habilitation and rehabilitation of the hearing impaired. It begins with infancy and proceeds through preschool, elementary, adolescence, young adulthood, adulthood and the elderly to emphasize a variety of proven therapeutic approaches. 170 pages, \$14.95.





Do you have a new colleague who doesn't belong to the Indiana State Medical Association? Call Mrs. Rosanna Iler at (317) 925-7545 or 800-382-1721 (WATS) for a free membership kit.

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NEWS NOTES.

Attention Focused on Hospital Equipment Financing Needs

The cost of delivering high technology, high quality medical care to patients in this country is still rising but at a slower rate. Even though Indiana physicians' charges for office visits and surgery are less, in most cases, than the surrounding states and the voluntary rate review process for Indiana hospitals has kept rates below the national average, Indiana residents are feeling its effect.

ISMA physicians, aware of this upward spiral in health care costs due to increased technology, increased demand, poor health habits, an aging population, inflation, and government regulations, have joined with business and industry to identify ways to cut costs without affecting the quality and availability of medical care.

In addition, the Indiana General Assembly has passed legislation creating the Indiana Hospital Equipment Financing Authority. This Authority is composed of seven members from diverse fields of experience, appointed by the Governor.

The Authority is not a state agency, but rather an independent public instrumentality. Its purpose is to survey health care facilities to ascertain their needs for future

CME Quiz . . .

CONTINUED FROM PAGE 373

- 7. Following insertion of a central venous catheter, a chest x-ray should be obtained to assure adequate positioning of the catheter, as well as any complications of line insertion. The optimal catheter position is:
 - a. at the confluence of subclavian and the internal jugular veins.
 - b. in the superior vena cava, just above the atrium.
 - c. in the right atrium.
 - d. in the right ventricle.
 - e. through the heart, into the inferior vena cava.
- 8. Currently, it is felt that the most sensitive indicator in assessing nutritional *repletion* in the malnourished patient is:
 - a. positive nitrogen balance.
 - b. normal serum albumin levels.
 - c. normal lymphocyte count.
 - d. positive skin tests.
 - e. normal serum transferrin level.

equipment financing, refinancing of prior equipment purchases, and financing for presently leased equipment. Health equipment is defined as any fixture or personal property determined by the Authority to be necessary or helpful for medical care, research, training or teaching in Indiana.

As equipment financing or re-financing needs are confirmed, the Authority is empowered to issue tax-exempt, municipal bonds for sale to the investing public. Proceeds from these sales will be loaned to non-profit health care facilities which have completed the necessary steps for approval required prior to purchase of health care equipment.

The Authority intends to host informational meetings in various regions of Indiana to fully acquaint health care providers with this program. Anyone interested in learning more should contact the Indiana Hospital Association—(317) 926-I395—and plan to attend a regional meeting.

The Authority members are: John Gaither, chairman, Evansville; Kaye Keller, vice-chairman, Indianapolis; Eugene Clayton, New Albany; Dan DeMars, Indianapolis; John Frick, South Bend; Edison Thuma, Indianapolis; and George T. Lukemeyer, M.D., ISMA president, Indianapolis.

PCF Surcharge Raised

The surcharge for the Patients' Compensation fund (PCF) was increased April I from 25% to 50%. The increase became necessary afer 35 judgments were paid from the PCF in December 1983, amounting to just over \$10.5 million, leaving a year-end balance of just over \$1.3 million. Sixteen petitions against the PCF were carried over to 1984. The average payment from the PCF has been in excess of \$300,000.

The ISMA Malpractice Advisory Committee has been monitoring the PCF and other aspects of medical liability. It is prepared to make recommendations to the insurance commissioner and a legislative study committee. One area that has already been discussed with the insurance commissioner is a better defense of the claims pending against the PCF and ISMA has already transmitted to the commissioner pertinent recommendations.

EcuMed to be a Year-Round Medical Exhibition Center

A \$2 billion complex is to be built at Fort Lauderdale, Florida to serve as a world center to unify health and medical information. The center, to be named EcuMed, will deal in clinical developments, products and technology.

Chairman of the Board is Elliot L. Richardson, former U.S. Secretary of Health, Education and Welfare. Board members will come from medical education, hospital administration, medical specialities and federal medical bureaus; they will include J. Alexander McMahon, president of the American Hospital Association, Judith Ryan, Ph.D., executive director of the American Nurses Association, James H. Sammons, M.D., executive vice president, American Medical Association, and Richard Wilbur, M.D., The Council on Medical Speciality Societies.

The construction, which will start in November 1984 and conclude in 1987, will result in a building that is expected to be the largest structure in the United States. It will be the first permanent year-round health care exhibition center, trademart, education campus and conference center. Construction will proceed in phases. The first phase will provide for 2.3 million square feet of exhibit area, organized into atrium galleries of seven levels each.

Lithotriptor Now in Use

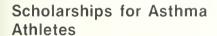
Methodist Hospital, Indianapolis, is one of six hospitals in the United States experimenting with the non-surgical removal of renal calculi. The hospital is using what is called an extracorporeal shock wave lithotriptor, a device that produces shock waves to pulverize kidney stones.

The technology was developed in West Germany where it is reported that, of the German patients treated, 90% were free of stones following treatment, 9% had some fragments left which did not require further treatment, and only 1% required surgery; no complications were reported. Each of the U.S. sites will treat 50 patients and report results to the FDA for final approval here.

VA Term Policy Cap

The Veterans Administration will cap the premium rates for term policyholders at age 70. The VA has over a million term policies in effect. Some 50,000 veterans will benefit from the cap in 1984.

The action is possible because veterans are living longer than was expected when the rates were established in the 1940s: because earnings from the reserves in the trust fund have been higher than expected; and because dividends normally paid to policyholders whose premiums will not be capped can be used to cover additional costs which may result from freezing the rates at age 70.



The Asthma & Allergy Foundation of America has announced a \$21,000 college scholarship program to be awarded annually to high school students who, despite the handicap of asthma, excel in sports as well as academic studies.

Known as the Asthma Athlete of the Year competition and made possible by a grant from Schering-Plough Corporation, six scholarships will be awarded, beginning this year, with the top four-year



A PANEL of Indianapolis reporters explain to physicians how to communicate more effectively with the news media. From left, are Jane Stegemiller of the Indianapolis News, Tim Paige of WTLC-Radio and the Defense Information School, and Carrie Jackson of WTHR-TV. The occasion was a day-long March seminar conducted in Indianapolis for faculty members of the Indiana Academy of Family Physicians. The theme was "Family Practice in a Competitive World,"—PHOTO BY JOYCE WOLF

scholarship totaling \$10,000. The second place winner will receive a \$5,000 scholarship awarded over four years; third place, \$3,000 over four years; and three runnersup, \$1,000 each.

Students in their sophomore, junior and senior years of high school are eligible. Winners will be announced late this year and awards presented in January 1985. Students entering college in September 1984 or later will receive the full amount of scholarships.

Nominating ballots must be submitted by Oct. 31. Ballots are being distributed to physicians specializing in the treatment of asthma, bronchial and chest disorders. They will also be available from local AAFA chapters and from AAFA, 1302 18th St. N.W., Suite 303, Washington, D.C. 20036 or from the Professional Services Dept., Schering Corp., Galloping Hill Road, Kenilworth, N.J. 07033.

Physician Recognition Awards



The following ISMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned, and is acceptable proof in most states requiring CME in re-registration that the mandatory hours of CME have been accomplished.

> trick, Neil E., Indianapolis Jay, James M., Indianapolis Jeha, Mikhail F., Crown Point Johns, Janet S., Lafayette Judy, Lawrence A., Evansville Kane, Jack L., Indianapolis Kelty, Paul D., Corydon Lambertus, John, Terre Haute Mantravadi, Rao Venkata P.,

Fort Wayne McEwen, David A., Lafayette Merkle, George W., Bluffton Molstad, Clay L., Lafayette Moore, William G., LaPorte

Morey, Edwin E., Fort Wayne Welk, Gordon D., Rossville

Alexander, Alan A., Lafayette Antalik, Thomas J., Muncie Arab, Mohammad K., Michigan City Bauer, Richard C., Lafayette Biegel, Angenieta A., Indianapolis Bleza, Maximo T., Munster Brownley, Emma J., Speedway DaCosta, Carlos M., Merrillville Dolan, Patrick A., Indianapolis Donesa, Antonio B., Fort Wayne Evans, Daniel R., Valparaiso Gettle, David R., Carmel Goel, Vijender N., Lawrenceburg Gourieux, Edward D., Evansville

Painchaud, Lionel A., Muncie Pantazis, Karen Z., Indianapolis Pruitt, Jacob E., Merrillville Reynolds, John L., Martinsville Salberg, Larry M., Merrillville Salvo, Atee S., Williamsport Sharp, Thomas W., Bloomington South, Terry A., Evansville Spence, William C., Knightstown Stransky, Theodore J., Evansville Sun, Chen T., Hebron Warner, Theodore M., Indianapolis

NEWS NOTES

Here and There . . .

- Point has been elected president of the medical staff at St. Anthony Medical Center; Dr. John T. King is president-elect, Dr. R. P. Unni is secretary and Dr. Kumpol Dennison is treasurer.
- family physician, retired from practice in March; he is moving to Arizona.
- ... Dr. Richard A. Silver has been elected president of the medical staff at Winona Hospital, Indianapolis; Dr. John D. Twenty is president-elect, and Dr. David B. Goldenberg is secretary-treasurer.
- Dr. Dean L. Strycker has been reelected president of the medical staff at Memorial Hospital, South Bend; Dr. George B. Friend is vice-president, and Dr. Alfred C. Cox is secretary-treasurer.
- napolis, president of the Indiana Psychiatric Society, has been appointed director of the Dept. of Psychiatry at Methodist Hospital, Indianapolis.
- ... Dr. Frank Johnson Jr. of Indianapolis, director of the Marion County Health Department, is chairman of the 1984 board of directors for Flanner House of Indianapolis, a social service organization.
- . . . Dr. John S. Wilson of Columbia City has been appointed Whitley County health officer.
- . . . Dr. Neil H. Levine of Indianapolis served as chairman of the annual Walk, Run, Jog and Bike for Heart event at the



"You appear to be suffering from the side effects of Unorganized Paperwork Syndrome."

Indianapolis Motor Speedway Iast month.

- named chairman of the Department of Medicine, Indiana University School of Medicine; he has been acting chairman since **Dr. Walter J. Daly** relinquished that chairmanship to become dean.
- ... Dr. Robert E. Suess of Indianapolis has been named medical director of Detroit Diesel Allison.
- ... Dr. Thomas V. Graber of Elkhart, and Dr. James A. Rang of Evansville have been named fellows of the American Academy of Orthopaedic Surgeons.
- ... Dr. Walter Fritz of Knox has been appointed Starke County health officer.
- ... Dr. Donna A. Wilkins of Muncie, recently board certified in neonatology, discussed Sudden Infant Death Syndrome at a March meeting of the National SIDS Foundation, East Central Indiana Chapter.
- at Riley Children's Hospital and chairman of pediatrics at the LU. School of Medicine, has been presented the Irving S. Cutter Medal by the honorary medical society, Phi Rho Sigma; the award honors outstanding contributions to medicine.
- ... Dr. Robert E. Rogers of Indianapolis recently participated in the Visiting Professor Program at St. Joseph's Hospital in Fort Wayne with a talk on "Ectopic Pregnancy."
- ... Dr. Patricia Bader, a Parkview Memorial Hospital geneticist/pediatrician, discussed genetics and genetic counseling at the DeKalb County Preschool for the handicapped in February.
- . . . Dr. George Plain, a South Bend general surgeon more than 40 years, has retired from practice.
- has been elected to membership in the American Society of Coloscopy and Cervical Pathology (ASCCP).
- ... **Dr. David C. Brandes**, a Marion urologist, discussed "Urological Problems and Management in M.S." at the March meeting of the Wabash County Multiple Sclerosis Support Group.
- Bend has been certified in vascular surgery by the American Board of Surgery.

... Dr. Freeman Martin of Indianapolis has been named to the advisory board of the Children's Museum, Indianapolis.

Pre-Med Education Council

Dickinson College, a liberal arts college in Carlisle, Pa., announces the creation of a National Advisory Council of Premedical Education, composed of college presidents, medical school professors and a Nobel laureate.

The council's mandate is "to produce, discuss and publish papers addressing the relationship between undergraduate study and medical education."

"Medical students and physicians in general have never had a greater opportunity to incorporate the liberal arts learnings—humanities, social sciences and natural sciences—to build a much needed system of effective health care for the whole human being," explained Dr. Samuel Banks, Dickinson College president.

In addition to publishing papers, the National Advisory Council plans to build models of course studies to address specific concerns of the premedical student. The group will release its findings to medical associations and schools around the country.

The charter members include: Samuel A. Banks, Ph.D., president of Dickinson College; Joanne Trautmann Banks, Ph.D., professor of humanities and English at The Pennsylvania State University College of Medicine and Liberal Arts; Lewis W. Bluemle, Jr., M.D., president of Thomas Jefferson University Medical School; Baruch S. Blumberg, M.D., Nobel laureate for the physiology of medicine; Leighton E. Cluff, M.D., executive vice president of the Robert Wood Johnson Foundation; Steven Muller, Ph.D., president of Johns Hopkins University; Edmund D. Pellegrino, M.D., director of the Joseph and Rose Kennedy Institute of Ethics; Richard C. Reynolds, M.D., dean of the University of Medicine and Dentistry of New Jersey/Rutgers Medical School; and Lewis Thomas, M.D., chancellor of Memorial Sloan-Kettering Cancer Center.

New ISMA Members

The following physicians were welcomed in March as new members of the Indiana State Medical Association:

LeRoy F. Aders, M.D., Muncie, internal medicine.

S. Taha Anvari, M.D., Huntingburg, neurology.

Ruth S. Bainbridge, M.D., Indianapolis, family practice.

Thomas A. Barley, M.D., Indianapolis, internal medicine.

Lee Ann Bauer, M.D., Batesville, obstetrics and gynecology.

Arnold E. Brown, M.D., Indianapolis, family practice.

John T. Burger, M.D., Indianapolis, radiology.

Alison R. Calkins, M.D., Indianapolis, therapeutic radiology.

Marcus M. Dick, M.D., Terre Haute, anesthesiology.

Jean A. Disseler, M.D., Muncie, radiology.

Richard W. Eaton, M.D., Indianapolis, orthopedic surgery.

Alexander A. Fondak, M.D., Kokomo, dermatology.

Helen H. Grant, M.D., Kewanna, family practice.



John L. Haste, M.D., South Bend, family practice.

Timothy L. Hobbs, M.D., Anderson, family practice.

Robert B. Kolbe, M.D., South Bend, family practice.

Robert J. Kunz, M.D., Indianapolis, internal medicine.

David G. Moore, M.D., Indianapolis, neurology.

Steven C. Paschall, M.D., Danville, emergency medicine.

Pragnaben S. Patel, M.D., Terre Haute, physical medicine and rehabilitation.

Shantilal S. Patel, M.D., Terre Haute, internal medicine.

Chandrika R. Raval, M.D., Fort Wayne, internal medicine.

Judith A. Robinson, M.D., Indianapolis, obstetrics and gynecology.

Gregory P. Sutton, M.D., Indianapolis, obstetrics and gynecology.

Amarjit Viens, M.D., Indianapolis, internal medicine.

Grace L. Walker, M.D., Indianapolis, family practice.

Daniel A. Walters, M.D., Muncie, family practice.

Philip D. Watson, D.O., Vincennes, internal medicine.

Wayne B. White, M.D., Indianapolis, family practice.

Paul T. Yoder, Ir., M.D., Muncie, family practice.

Nicotine Chewing Gum

Clinical research at Indiana University School of Dentistry has demonstrated that nicotine-containing chewing gum not only aids smokers to stop smoking, but also does no harm to the teeth, gums or oral mucosa.

Dr. Arden Christen reported on a 15-week study involving 208 smokers, all of whom had a thorough dental prophylaxis prior to the test. The group was randomly divided into two sections. One chewed nicotine gum, the other chewed a placebo gum. Some subjects stopped smoking during the test. Both groups developed stoppers.

The dental prophylaxis conducted at the end of the research showed that the smokers developed more plaque and had more gingivitis than those who ceased smoking. There was, however, no indication that the nicotine gum damaged any dental structures. Same for the oral mucosa. At the end of 15 weeks, 12% of the subjects who chewed nicotine gum had quit, compared to 5% in the placebo group.

Fetal Alcohol Syndrome

The National Clearinghouse for Alcohol Information is conducting a national campaign for educational purposes, both public and professional, in regard to the Fetal Alcohol Syndrome. A package of informational and educational material may be obtained by writing the Clearinghouse at Station IN, P.O. Box 2345, Rockville, Md. 20852.

Summer Camp Planned for Young Cancer Patients

Applications are now being accepted for the fourth annual session of Camp Little Red Door, a one-week summer camp for cancer patients ages 8 to 18. It will be held Aug. 11 to 17 at Bradford Woods, nine miles south of Mooresville in Morgan County.

Little Red Door (the Marion County Cancer Society) hopes to enroll 50 campers—46 attended last year. The program is designed to give young cancer patients the fun and excitement of the outdoors, camp experience, and insight

into their physical limitations imposed by the disease. Volunteer physicians and nurses from Riley Children's Hospital are on duty 24 hours a day.

Brochures and applications can be obtained by calling (317) 925-5595 or by writing to Camp Little Red Door, 1801 N. Meridian St., Indianapolis 46202. Reservation deadline is June 1.



office. I understand they have plenty of forms to fill out."

NEWS NOTES

For the Asking . . .

Available to physicians for the asking are:

- "Sexual Problems in Medical Practice," a clinical guide designed for practicing physicians and health care professionals. The AMA publication, selling for \$24 per copy, provides a comprehensive overview of human sexual behavior. It focuses on how physicians can deal with patients' sexual problems within the scope of their practice. AMA members receive a 10% discount. To order, call the AMA Order Dept. at (312) 645-5123.
- "CPT 1984" contains information on 6,000 medical, surgical and diagnostic services, including listings for more than 750 new and revised entries. This fourth edition of Current Procedural Terminology is the most comprehensive and current manual for describing, coding and reporting medical procedures. \$25 each, with a 10% discount for AMA members. Add \$4 for handling and delivery. Orders must be prepaid. Write Order Dept., Op 341, AMA, P.O. Box 10946, Chicago 60610, or call (312) 645-4738.
- A video presentation on the use of carcinoembryonic antigen for monitoring breast cancer is available from Abbott Laboratories. Dr. Hortobagyi, an internist from M.D. Anderson Hospital,

- discusses a study of 157 patients with metastatic breast cancer which shows an excellent correlation between serial plasma CEA levels and response to therapy or progression of disease. For information, write to Tumor Market Information Exchange, c/o Abbott Diagnostics Division, Abbott Park, Ill. 60064.
- A new monograph, "Clinical Applications of Carcinoembryonic Antigen in Breast Cancer," is available from Abbott Laboratories, Diagnostics Division, North Chicago, Ill. 60064.
- A slide/lecture guide entitled "The Clinical Utility of Tumor Markers" has been prepared by Richard S. Stein, M.D. of Vanderbilt University Hospital in consultation with Morton K. Schwartz, Ph.D., of Memorial Sloan-Kettering Cancer Institute. For information, write Tumor Marker Information Exchange, Abbott Diagnostics Division, Abbott Park, Ill. 60064.
- This year's 137-page AVI catalog contains 23 new titles and five other titles which are new editions of textbooks and reference books. Titles include works on food science and technology, food service, nutrition and health. Free of charge. Write or phone AVI Publishing Company, 250 Post Road East, P.O. Box 831, Westport, Conn. 06881—(203) 226-0738.

• Public Affairs Pamphlet 622, "How to Handle Stress: Techniques for Living Well," is written by Millard Bienvenu, director of the Counseling Center at Northwestern State University of Louisiana and a consultant on stress management. He defines stress, emphasizes that some stress is necessary and even essential, and states that chronic stress may damage health. He lists 10 pointers for managing stress and maintaining a healthy lifestyle. Send \$1 to Public Affairs Committee, 381 Park Ave. South, New York, N.Y. 10016.

Public Education Program

The American College of Physicians, with the cooperation and financial support of The Upjohn Company, is launching a multi-year public education project. A new film series will show how doctors identify and treat illnesses. The films will focus on the importance of common physical symptoms such as abdominal pain, headaches, and excessive thirst—such symptoms that often are not recognized by people as signs of underlying disease. The first of the films will be offered to civic organizations, industry, cable television and other groups this month

More people have survived cancer than now live in the City of Los Angeles.

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The Foundation is managed by a board of directors that comprises the members of the ISMA Executive Committee. At present, proceeds from the Foundation investments are awarded to INDIANA MEDICINE to further the continuing medical education program.

Memorial contributions made to the Foundation in lieu of flowers will be acknowledged by the secretary in a letter to the family of the deceased.

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s up to health-care providers to open up the clogue about prescription drugs. When you write,

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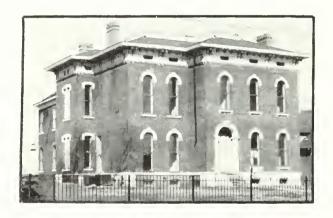
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Ball State University Student Center University and McKinley Streets Muncie, IN 47306 317 285-6396 Thursday, June 7, 1984

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OBITUARIES.

Parker R. Beamer, M.D.

Dr. Beamer, 69, a pathologist and former professor at Indiana University School of Medicine, died March 7 at his home in Oak Park, Ill.

He was a 1943 graduate of Washington University School of Medicine, St. Louis, and an Army veteran of World War 11.

Dr. Beamer practiced in Indianapolis from 1953 to 1965. He was a pathology professor at a Chicago medical school from 1970 to 1980. At the time of his death, he was a member of the Dept. of Pathology, West Suburban Hospital, Oak Park. He was a diplomate of the American Board of Pathology.

Sydney L. Stevens, M.D.

Dr. Stevens, 72, a retired Indianapolis otolaryngologist, died March 12 at Community Hospital, Indianapolis.

He was a 1937 graduate of Indiana University School of Medicine and was an Army veteran of World War II. He retired in December 1983.

Dr. Stevens, a diplomate of the American Board of Otolaryngology, was formerly an assistant professor at I.U. School of Medicine. He was a member of the American Academy of Otolaryngology and the American Rhinologic Society. In 1978 he was president of the Murat Shrine's medical staff and was Shriner of the Year.

Otto F. Lehmberg, M.D.

Dr. Lehmberg, 85, a Columbia City physician and Whitley County Health Officer, died Feb. 1 at Whitley County Memorial Hospital.

He was a 1924 graduate of Chicago General Medical College, now Loyola University, and was a veteran of World War II. He retired from private practice in 1976.

Dr. Lehmberg was a former president of the Whitley County Medical Society and a former chief of staff of Whitley County Memorial Hospital. He was a member of the ISMA Fifty Year Club. In 1976 he was named Citizen of the Year by the Columbia City Area Chamber of Commerce.

Herbert Frank, M.D.

Dr. Frank, 69, a retired South Bend internist, died March 10 at Solana Beach, Calif., where he was visiting.

He was a 1941 graduate of the University of Cincinnati College of Medicine and was an Army veteran of World War II. He retired last year.

Dr. Frank was a diplomate of the American Board of Internal Medicine and was a fellow of the American College of Physicians. He was a member of the American Society of Internal Medicine and was a past secretary of the St. Joseph County Medical Society.

Memorials: Indiana Medical Foundation

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Forrest F. Radcliff, M.D.

Dr. Radcliff, 60, an Evansville orthopedist, died Feb. 16 at his home.

He was a 1953 graduate of the University of Louisville School of Medicine and was an Army veteran of World War II.

Dr. Radcliff was an ISMA delegate representing Vanderburgh County. He was a member of the ISMA Commission on Constitution and Bylaws and a former member of the Commission on Legislation.

Fay F. Boys, M.D.

Dr. Boys, 82, a former East Chicago physician, died Feb. 12 in Naples, Fla. He was a 1927 graduate of the University of Kansas School of Medicine.

Dr. Boys was a past president of St. Catherine Hospital, East Chicago, and was a past president of the Lake County Medical Society. He was a member of the ISMA Fifty Year Club, the American College of Surgeons and the Industrial Medical Association.

Harley M. Kauffman, M.D.

Dr. Kauffman, 88, a retired former staff psychiatrist at Evansville State Hospital, died Feb. 15 at his home.

He was a 1920 graduate of Indiana University School of Medicine and was an Army veteran of World War I. He retired in 1970.

Dr. Kauffman was a member of the ISMA Fifty Year Club. He joined the staff of the Evansville State Hospital in 1925 and worked there part-time until he retired.

Edgar E. Richards, M.D.

Dr. Richards, 81, a retired Russellville (Montgomery County) physician, died March 11 in Crawfordsville.

He was a 1934 graduate of Indiana University School of Medicine. He retired in 1975.

Dr. Richards was a member of the American Academy of Family Physicians.

William J. Ryan, M.D.

Dr. Ryan, 76, a Columbus surgeon, died Feb. 25 at his home.

He was a 1937 graduate of Case Western Reserve University School of Medicine, Cleveland, and was an Army veteran of World War II.

Dr. Ryan was a past president of the Bartholomew-Brown County Medical Society. He was a fellow of the International College of Surgeons and a member of the American Society of Abdominal Surgeons and the International Academy of Proctology. He was named to the board of directors, Bartholomew County Board of Health, in 1978.

William A. Karsell, M.D.

Dr. Karsell, 67, director of Ob-Gyn education at Methodist Hospital, Indianapolis, died March 12 at his home.

He was a 1942 graduate of Indiana University School of Medicine.

Dr. Karsell, a former ISMA delegate representing Marion County, was a clinical assistant professor at 1UMC for 10 years. He had practiced in Bloomington until 1961. He was a diplomate of the American Board of Obstetrics and Gynecology and was a member of the American College of Obstetrics and Gynecology.

Chris A. Pascuzzi, M.D.

Dr. Pascuzzi, 57, a South Bend pathologist, died Feb. 15 at St. Vincent Hospital, Indianapolis.

He was a 1950 graduate of Creighton University School of Medicine, Omaha. He was a Marine Corps veteran of World War II and a Navy veteran of the Korean War.

Dr. Pascuzzi was a diplomate of the American Board of Pathology and was a member of the College of American Pathologists and the American Society of Clinical Pathologists.

Richard P. Good, M.D.

Dr. Good, 80, a retired Kokomo otolaryngologist, died Feb. 19 at St. Joseph Memorial Hospital, Kokomo.

He was a 1928 graduate of Indiana University School of Medicine and was an Army veteran of World War II. He retired in 1975.

Dr. Good, who was named a Sagamore of the Wabash by Governor Otis Bowen, was a member of the ISMA Fifty Year Club. He was certified by the American Board of Otolaryngology and was a member of the American College of Surgeons. He was also a former president of the Howard County Board of Health.

John W. Rousseau, M.D.

Dr. Rousseau, 59, a retired Fort Wayne physician, died March 15 at Parkview Memorial Hospital.

He was a 1948 graduate of the University of Michigan Medical School. He was a Navy veteran of World War II and an Air Force veteran of the Korean War.

Dr. Rousseau, a former president of the Parkview Memorial Hospital medical staff, retired in 1979 and moved to Angola. He was certified by the American Board of Obstetrics and Gynecology and was a member of the American College of Obstetrics and Gynecology and the American College of Surgeons.

Herbert C. Ufkes, D.O.

Dr. Ufkes, 55, a North Judson (Starke County) doctor of osteopathy, died Feb. 7 at his home.

He was a 1954 graduate of the Chicago College of Osteopathic Medicine.

Dr. Ufkes was a member of the American College of Emergency Physicians. He was a frequent participant in distance runs and served athletes in the North Judson-San Pierre area. He was a member of the American Medical Joggers Association.

PUBLIC HEALTH NOTES. . .

CONTINUED FROM PAGE 357

dent to and from the hospital or other health facility. Here again it becomes the physician's judgment of the patient's condition as to whether additional tests need to be done to determine if the patient is communicable. If additional tests are performed or if symptoms compatible with active TB develop, they should be discussed and evaluated with the facility's medical director before readmission. When the resident returns to the facility, appropriate records should be sent with the resident.

In accordance with IC 16-1-10, "Every case of tuberculous disease and every tuberculin reactor must be reported to the local health officer within 24 hours," This

enables the local health department to be aware of the incidence of infection or disease, so that necessary follow-up procedures can be instituted in the community.

For further information, please contact Mary Marrs, Tuberculosis Program Coordinator, Indiana State Board of Health, (317) 633-8433.

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FULL TIME FAMILY PRACTICE physician wanted by July 1, 1984. Ten minutes outside Indianapolis area. Full X-ray and lab facilities on site. No capital required. Guaranteed salary and benefits. Forward CV and inquiries to 2506 Chaseway, Indianapolis, Ind. 46260.

TWO BOARD CERTIFIED INTERNISTS seek Internist Associate to re-establish a 3-member group in Internal Medicine. Long established practice. Initial support leading to partnership. Indianapolis, Ind. Associated with large, general teaching hospital. Reply to Drs. Rosenak and Thoman, 1815 N. Capitol Ave., #512, Indianapolis, Ind. 46202.

SHARE OFFICE SPACE—Seeking a physician to share office space in new office building on north-side of Indianapolis, near St. Vincent Hospital. Prefer Pediatrician, but will consider any physician. If interested, contact Dr. Alexander Kahn, (317) 872-7288.

SOUTHERN CALIFORNIA—We are seeking experienced specialists and general practitioners for our facilities in Los Angeles and Orange Counties. Located in close proximity to major teaching centers, we offer the opportunity of continued professional development and rewarding clinical practice in association with 350 full-time physicians. Compensation and benefits are excellent including paid vacation, educational leave, sick leave, and retirement; insurances included are malpractice, life, disability, medical and dental. Send CV to Director/Physician Recruitment, CIGNA Healthplans of California, 700 N. Brand Blvd., Suite 500, Glendale, Calif. 91203.

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FAMILY PRACTITIONERS — Excellent opportunity for family practice physicians in Montgomery County, Indiana. Two communities close to Crawfordsville, Indiana, are seeking a physician. Financial assistance is available thru hospital and communities. New 120 bed hospital in Crawfordsville, to open in May 1984. Contact Jim Harness, Assistant Administrator, Culver Union Hospital (317) 362-2800, Extension 201.

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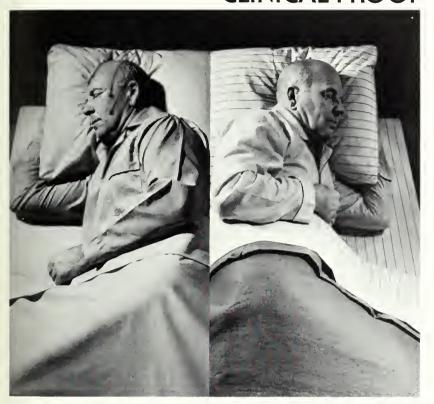
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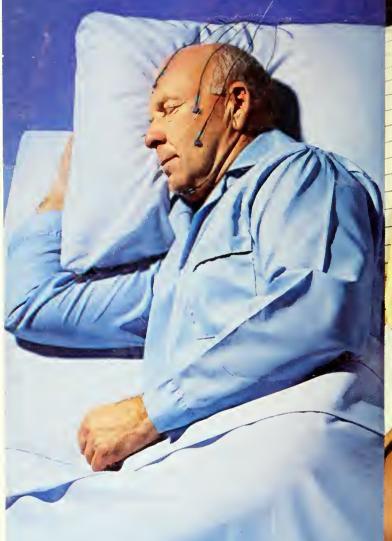
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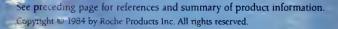
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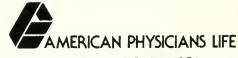
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This is a close-up view of intracellular lipid in Duchenne's muscular dystrophy tissue culture preparation. An explanation for this metabolic abnormality from the tissue culture perspective is given starting on page 446.

"We believe the malpractice picture **CAN** change—if we first help each other understand the problems and then tighten our controls."

Pennsylvania Casualty Company's physician executives discuss their roles in the company's ongoing effort to reduce and control malpractice risks.



Robert L. Lambert, M.D. Medical Director

"Our Medical Department focuses on the clinical aspects of malpractice claims and suits the company receives and tries to point out ways for doctors to avoid similar situations in the future. Through our reviews, we've been able to spot recurring problems or emerging trends and warn policyholders. We **don't** try to serve as 'amateur attorneys' or judge the actions or decisions of a colleague."



Joseph A. Ricci, M.D. Associate Medical Director

"One of the reasons I joined Pennsylvania Casualty Company is because of its true commitment to help physicians curb losses, and more importantly, prevent malpractice. That commitment goes beyond merely worrying about lost dollars; there is a genuine interest in improving the quality of care being rendered. Education—something I believe in strongly—is the cornerstone of the company's service to policyholders."



Clinton H. Lowery, M.D. Vice President, Risk Management/Q.A.

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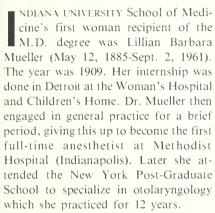


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MUSEUM NOTES

CHARLES A. BONSETT, M.D., Indianapolis



In 1932 she returned to Methodist Hospital as the assistant director in anesthesia and, from 1940 to 1955, was the department head of anesthesiology of Indianapolis General Hospital (now Wishard). She was a diplomate of the American Board of Anesthesiology and was the senior consultant in anesthesiology at the Indianapolis Veterans' Hospital.

Dr. Mueller was thus a pioneer in a number of areas of Indiana medicine. When she graduated in 1909, however, she was far from being the lone representative of her sex. Indiana had at least 160 women physicians, about 40 being in Marion County. Most were located in rural areas and all parts of the state were represented. Examples include Dr. Katherine S. Busse, Vanderburg County; Dr. Grace Campbell, Vigo County; Dr. Adah McMahan, Tippecanoe County; Dr. Margaret A. Osborn, St. Joseph County; Dr. Della Howe, Allen County; Dr. Nancy Snodgrass, Delaware County; Dr. Mae Munt, Cass County; Dr. Sarah Morrow, Wayne County; and Dr. Lola A. Johnson, Jefferson County—to name only a very few.

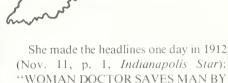
The most energetic of Marion County's women physicians of this period was Dr. Hannah Graham, who has been mentioned in this column before (August 1982). And she was mentioned often in the daily papers, being a driving force in



Lillian Mueller, M.D.

movements for civic improvement (e.g., smoke abatement), protecting women from the evils of society (e.g., the white slave traffic), politics (she spoke in behalf of Theodore Roosevelt's bid for the Presidency in 1912 when he came out in support of women's suffrage), and children's welfare (on one occasion of exceedingly foul weather, Dr. Graham was the only one of five scheduled physician speakers to appear). She also made the papers with regard to her practice of medicine. She removed a man's appendix in 1906, for example, which some readers considered unlady-like and shocking.

In a day when most women depended on the horse and buggy for their private transportation, and when those relatively few who owned automobiles also had their own chauffeurs, Dr. Hannah Graham drove her own machine. At this time most cars had to be hand-cranked to start. It is not known if Dr. Graham's car had a self-starter, but for her this would have made no difference.



TYING VEINS WITH STRING."

"A few inches of twine and the ministrations of a woman physician who left her automobile and endangered an immaculately tailored gown in a Capitol Avenue gutter saved a man from bleeding to death early yesterday afternoon . . . Dr. Graham was driving north on Capitol Avenue when (she saw) the figure of a man who appeared to be in a drunken stupor or dead . . . She left her car and going to the man found that he was insensible and was losing blood rapidly. Two of the men (onlookers) turned the man on his back at Dr. Graham's request and disclosed . . . a gash above the left eve that penetrated to the skull, another wound under the eye, and a broken nose.

"Assuming charge of the situation, Dr. Graham dispatched one of the bystanders to a restaurant to obtain twine and, when he had returned, began tying up the arteries one by one . . . When the flow had been stopped from all of the arteries but one, Dr. Graham took a pair of artery forceps from her carrying case, closed the last remaining vessel with it and bandaged the wound with a towel.

"An ambulance had been called in the meantime and (the patient) was sent to the hospital. How he came to fall against the curbstone is conjectural, but a flask of whiskey found in his pocket seemed to offer the best explanation."

Another newspaper item of unusual note was a classified ad in the *Indianapolis Star* for May 26, 1910 (p. 7, C.7): "WANTED—LADY PHYSICIAN, licensed in Indiana to take a permanent position with a reliable medical company conducting an honest but nonethical business . . ." Dr. Mueller would have ignored such an ad. Dr. Graham, if aroused, would have been after the company with the vigor and zeal of a Carrie Nation.

RESIDENT MEDICAL SOCIETY ASSOCIATION

What's in a Name?

N JULY I, a new group of residents will begin practicing medicine in Indiana. They will be joining more than 700 other physicians in training in Indiana who are undergoing intense personal and professional transition as residents. However, this group of residents, unlike any before them, will have an organization to support their health, well-being and professional growth as physicians in training throughout their entire residency. This organization will represent intern/resident opinions and ideals at the local and national levels, and will encourage and support the active participation of physicians in training in the Indiana State Medical Association. This unique organization for residents is the Resident Medical Society (RMS) of the Indiana State Medical Association.

Last September, an organizational meeting of the RMS was held to comply with a resolution from the ISMA House

For more information on the activities of the Resident Medical Society, contact Carol Ann Cunningham, ISMA Resident Medical Society Liasion, at ISMA Headquarters.

of Delegates, which noted that "residents represent the future of organized medicine but are currently underrepresented in organized medicine." Residents from around the state attended this meeting, demonstrating their interest

in organized medicine and concern for the future of medicine in Indiana. Recognizing that all physicians must speak with a unified voice to be effective, they formed committees and elected leaders to recruit resident members and generate interest in organized medicine at the local level

On April 14, the efforts of these initial resident members were rewarded when Dr. Paul Siebenmorgen, chairman of the ISMA Board of Trustees, presented the RMS with the first component society charter issued by the Indiana State Medical Association. This historic presentation denoted the vital role today's residents will play in the future of organized medicine and the importance of their involvement in the ISMA.



DR. PAUL SIEBENMORGEN (left), chairman of the ISMA Board of Trustees, presents the charter for the Resident Medical Society to Dr. Steve Land, the society's president. The ceremony took place during the interim meeting at the Lilly Center, Indianapolis, April 14.



SIGNING the first component society charter issued by ISMA are Donald F. Foy (left), ISMA executive director, and Dr. George T. Lukemeyer, ISMA president. The charter is required by ISMA Bylaws.

In less than a year, this group of residents made some remarkable accomplishments for an organization in its infancy. In October, the RMS introduced an emergency resolution to the ISMA House of Delegates to reduce resident dues from 20% to 10% of ISMA regular member dues; it was approved by the House by a vote of 137-1. Then, in December, the RMS sent its first delegates to the AMA Resident Physician Section's interim meeting. In Los Angeles they introduced a resolution on behalf of the Indiana RMS which pledged a commitment to reduce deaths and injuries due to drunk driving. This resolution was eventually passed by the AMA House of Delegates, after passage by the Resident Physician Section. They returned home charged up with new ideas and reports on organized medicine.

In addition to increasing the representation of Indiana residents at both the local and national levels, the Resident Medical Society has embarked on a major recruitment campaign for ISMA and RMS members, and has established communication links for organized medicine at every hospital in Indiana with a residency program. These communication links, known as key contact residents, have helped the RMS stay in close contact with the residents scattered among seven Indiana cities and meet the needs of residents at individual hospitals. The RMS has also started publishing a quarterly newsletter entitled RMS Vital Signs.

The Resident Medical Society has made an effort to provide educational programs for residents. Recent meetings have in-



OFFICERS for 1984-85 of the newly chartered Resident Medical Society are (from left) Dr. Wayne B. White, alternate ISMA delegate; Dr. Mark Hochstetler, AMARPS delegate; Dr. Steve Land, alternate AMA-RPS delegate; Dr. Steven G. Lester, president and ISMA delegate; Dr. John G. Terry, president-elect; and Dr. Silvio Garcia, secretary-treasurer.

cluded discussion on borrowing money, peer review organizations, and organizing and financing the professional practice. These programs gave residents the opportunity to prepare themselves for their future in medicine and discover what action they can take during their residency to ease the transition into private practice.

Since members of the RMS vividly recalled the anxiety they experienced when they left medical school to begin their residency in Indiana, they decided their first large-scale service to residents would be to conduct a program and reception on June 27 to welcome residents to the practice of medicine in Indiana. The timely topic chosen for the program will be "Coping with Residency Stress."

The scheduled speaker for the evening is John-Henry Pfifferling, Ph.D., director of the Center for the Well-Being of Health Professionals, an independent, non-profit organization in Durham, N.C. Together with Dr. Jeffrey C. Blum, he founded the center in 1979.

In addition to this educational program, resource people have also been invited to familiarize these young physicians with Indiana, Indianapolis, the Resident Medical Society, and the companies which serve the medical community in Indiana. Resource people in such fields as insurance, accounting, financial planning, day-care, and other fields of interest to a newcomer and resident will be on hand.

WHAT'S NEW?

Perkin-Elmer's new AdvantageTM Patient Monitoring System measures inspired and expired gases of patients undergoing anesthesia. It offers breathby-breath analysis of all the respiratory gases and the commonly used anesthetic agents. By sharing a common mass spectrometer analyzer, up to 16 operating rooms can be economically monitored and the system is capable of being expanded to a maximum of 31 rooms.

Electro-Nucleonics has an in-office chemistry analyzer, the GEMSTARTM, which is fully automated for the office laboratory. It performs 21 preprogrammed chemistries and offers nine open channels for additional applications such as thyroid, theophylline, digoxin, acid phosphatase and others.

The FONAR Corporation has manufactured a truck-mounted mobile Nuclear Magnetic Resonance unit. It is devised to allow its use by a number of medical facilities in order for each of them to share the high cost of purchasing and operating the unit. The mobile unit has no need for a separate facility or specialty chemicals.

Ciba is introducing a reformulated adhesive on its transdermal nitroglycerin patch, Transderm[®] -Nitro. Studies show the new patch remaining in place for 24 hours in more than 97% of all cases. Studies were conducted variously under conditions of extreme heat and humidity and with exercise such as tennis or swimming, and with shower baths. No significant skin irritations were observed.

Instromedia announces the first major breakthrough in pacemaker monitoring in 15 years. The A + V/Pacemaker Data Transmitter has been designed and developed to function with all types of pacemakers. A single switch allows transmission of either the pacemaker pulse width or the ECG. The separate ECG waveform is not obscured by pulse width spikes, making the recognition of "P" waves easier.

Antek Instruments is introducing a simple, rapid method of determining total nitrogen in liquids, solids and gases. The "Chemiluminescent Nitrogen System" compares favorably with the Kjeldahl technique. It will provide a rapid assay of total nitrogen in I.V. solutions, urine, tissues and fecal samples.

Informed Consent: Alternatives Must Be Disclosed

Court Action

In obtaining a patient's informed consent, a physician must disclose alternative forms of treatment, including ones more hazardous than the recommended treatment, the Connecticut Supreme Court has ruled.

A patient with systemic lupus erythematosis underwent a kidney biopsy to determine the extent of lupus involvement in her kidneys. Before performing the procedure, the urologist discussed it with her and told her that there might be some bleeding and a risk of hemorrhaging and of losing a kidney. The alternative of an open biopsy procedure under a general anesthetic was not mentioned. He did not

consider it as a viable alternative because of a greater risk of complications. The patient signed a consent form after his discussion of the procedure with her.

During the biopsy, on November 3, 1972, the physician punctured the patient's gallbladder. It was later removed. The patient filed suit against the urologist for failure to obtain her informed consent. A trial court entered judgment for the physician, and the patient appealed.

Ordering a new trial, the Supreme Court said that a physician has a duty to advise the patient of possible alternatives in obtaining informed consent. The trial court committed reversible error in instructing the jury that the physician did not have to advise the patient of more

hazardous alternatives to the proposed treatment. One expert witness testified that an open biopsy was a viable alternative to a closed needle biopsy. That was sufficient to present a jury question on the issue, the court said. The jury might have concluded that the urologist failed to furnish the patient with information she would have found material in making her decision on the course of therapy, the court said. In addition, the court stated that it was now aligning itself with other jurisdictions that had abandoned geographical restrictions for evaluating the standard of care in medical malpractice cases.—Logan v. Greenwich Hospital Association, 465 A.2d 294 (Conn.Sup. Ct., Sept. 6, 1983)

Courtesy of The Citation, March 1, 1984.

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FUTURE FILE

Oncology Nursing

"Oncology Nursing Conference VI" will be sponsored by the Department of Nursing at the University of Texas M. D. Anderson Hospital and Tumor Institute at Houston Sept. 12 to 14 at the Hyatt Regency Hotel Downtown.

Write or phone Office of Conference Services, Box 131, M.D. Anderson Hospital, 6723 Bertner Ave., Houston 77030—(713) 792-2222.

Indiana University CME

For the Primary Care Physician

June 19-21—Family Practice Review, Part 11—Sheraton Meridian, Indianapolis.

For the Specialist

Aug. 10-11— Inflammatory Diseases of the Bowel—Hyatt Regency, Indianapolis.

For additional information, contact Indiana University School of Medicine, CME Division, 1120 South Drive, Indianapolis 46223—(317) 264-8353.

Nuclear Cardiology

The 9th annual Nuclear Cardiology Symposium will be held at the Red Carpet Hotel, Milwaukee, Wisconsin on September 19 to 22. AMA Category 1 credit. Write or phone Sarah Z. Aslakson, 465B WARF Bldg., 610 Walnut St., Madison, Wisc. 53705—(608) 263-2856.



"Anymore, I'd be glad for a close encounter of any kind."

The Journal of the American Medical Association publishes a list of CME courses for the United States twice yearly. The January listing features courses offered from March through August; the July listing features courses offered from September through February.

Internal Medicine Review

An intensive review of internal medicine for physicians planning to write the American Board of Internal Medicine Certifying Examination and for practicing internists who desire a contemporary review will be on July 22-28 at the University of Delaware. Housing is available immediately adjacent to the conference facility of the Newark Campus of the University of Delaware. The course carries 45 hours of Category 1 AMA credit.

For details call or write Sylvia Brocka, 2800 Pennsylvania Ave., Wilmington, Del. 19806—(302) 451-8151.

Emergency Care

"Common Emergency Care Problems" is the subject of a CME program at the Sheraton Hotel, Madison, Wisc., July 19 to 20. Credit for AMA Category 1; American College of Emergency Physicians and Family Practice credit applied for.

Contact Sarah Aslakson, 465B WARF Bldg., 610 Walnut St., Madison, Wisc. 53705—(608) 263-2856.

Pediatrics Symposium

The 12th annual Fall Pediatric Surgery/Pediatrics Symposium concerning "Care of the Seriously Ill Child" will be held at the Indianapolis Radisson Hotel, Keystone at the Crossing, Oct. 10-11. The symposium will be sponsored by the Indiana University School of Medicine.

Contact Jay Grosfeld, M.D., Riley Hospital, 702 Barnhill Drive, Indianapolis 46223—(317) 264-4681, or Joni Downs—(317) 264-8353.

Health Promotion

The Indiana State Board of Health will conduct a two-day health promotion conference June 21-22 at the Holiday Inn, Jasper.

The latest information, organization and programming in the health promotion field will be presented, to include school, community, hospital and industry health programs. An in-depth session on health risk appraisal also will be featured, and nationally recognized experts will provide new insights into health care.

The goal of the conference is to stimulate an organized approach to health education and risk reduction, and to enhance existing health promotion efforts in Indiana.

For registration information, contact Barbara Alborn, State Board of Health—(317) 633-0291.

Neurotrauma

Bethesda Hospital, Cincinnati, will sponsor a "Neurotrauma Conference" at Kings Island Inn in Cincinnati on July 7 and 8. It is planned particularly for emergency physicians and primary care physicians. The registration fee is \$195.

Contact Thomas J. O'Conner, Bethesda Hospitals, Cincinnati 45206—(513) 569-6339.



"And to my nephew, Harold, I leave my kidneys."

Before prescribing, see complete prescribing information in \$K&F CO. Ilterature or PDR. The following is a brief summary.

This drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual. If this combination represents the dosage so determined, its use may be more convenient in patient management. Treatment of hypertension and edema is not static, but must be reevaluated as conditions in each

Contraindications: Concomitant use with other potassium-paring agents such as spironolactone or amiloride. Further use a naruna, progressive renal or hepatic dystunction, hyperkalemia re-existing elevated serum potassium. Hypersensitivity to either omponent or other sulfonamide-derived drugs.

variance devaded setrum potassium. Hypersensitivity to either component or other sulfonamide-derived drugs.

Varnings: Do not use potassium supplements, dietary or othervise, unless hypokalemia develops or dietary intake of potassium is markedly impaired. If supplementary potassium is eeded, potassium tablets should not be used. Hyperkalemia an occur, and has been associated with cardiac irregularities. It is more likely in the severely ill, with urine volume less than one ier/day, the elderly and diabetics with suspected or confirmed nall insufficiency. Periodically, serum K* levels should be deternined. If hyperkalemia develops, substitute a thiazide alone, strict K* intake. Associated widened QRS complex or arrhythia requires prompt additional therapy. Thiazides cross the lacental barrier and appear in cord blood. Use in pregnancy equires weighing anticipated benefits against possible hazards, icluding fetal or neonatal jaundice, thrombocytopenia, other diverse reactions seen in adults. Thiazides appear and trimterene may appear in breast milk. It their use is essential, the atlent should stop nursing. Adequate information on use in hildren is not available. Sensitivity reactions may occur in atients with or without a history of allergy or bronchial asthma. ossible exacerbation or activation of systemic lupus erythelatosus has been reported with thiazide diuretics.

ossible exacerbation or activation of systemic lupus erythelatosus has been reported with thiazide diuretics.
recautions: Do periodic serum electrolyte determinations (partially important in patients vomiting excessively or receiving arenteral titudes, and during concurrent use with amphotericin B corticosteroids or corticotropin (ACTH). Periodic BUN and arum creatinine determinations should be made, especially in elederly, diabetics or those with suspected or confirmed renal sufficiency. Cumulative effects of the drug may develop in alteritis with impaired hepatic function. Thiazides should be used ith caution in patients with impaired hepatic function. They can ecipitate coma in patients with severe liver disease. Observe gularly for possible blood dyscrasias, liver damage, other idio-incratic reactions. Blood dyscrasias, liver damage, other idio-incratic reactions. Blood dyscrasias have been reported in attents receiving triamterene, and leukopenja, thrombocyto-inia, agranulocytosis, and aplastic and hemolytic anemia have en reported with thiazides. Thiazides may cause manifestation latent diabetes mellitus. The effects of oral anticoagulants may 3 decreased when used concurrently with hydrochlorothiazide; sage adjustments may be necessary. Clinically insignificant ductions in arterial responsiveness to norepinephrine have en reported. Thiazides have also been shown to increase the trallyzing effect of nondepolarizing muscle relaxants such as bocurarine. Triamterene is a weak lolic acid antiagonist. Do stiodic blood studies in cirrhotics with splenomegaly Antiperfensive effects may be enhanced in post-sympathectomy itents. Use cautiously in surgical patients. Triamterene has en found in renal stones in association with the other usual inclusios components. Therefore, Cybazide' should be used with ution in patients with histories of stone formation. A few occurnces of acute renal tailure have been reported in patients on yazide' when treated with indomethacin. Therefore, caution is inseed in administering no vazide, but should it develop, corrective measures should be een such as potassium supplementation or increased dietary ake of potassium-rich foods. Corrective measures should be situted cautiously and serum potassium levels determined continue corrective measures and 'Dyazide' should laborally values reveal elevated serum potassium. Chloride deficit as occur as well as dilutional hyponatremia. Concurrent use this chloropropamide may increase the risk of severe hypotremia. Serum PBI levels may decrease without signs of thyroid sturbance. Calcium excretion is decreased by thiazides vazide' should be withdrawn before conducting tests for paraiazides may add to or potentiate the action of other antihyper-

sive drugs

retics reduce renal clearance of lithium and increase the risk lithium toxicity.

verse Reactions: Muscle cramps, weakness, dizziness, headverse Reactions: Muscle cramps, weakness, dizziness, headhe, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, rpura, other dermatological conditions, nausea and vomiting, irrhea, constipation, other gastrointestinal disturbances; posal hypotension (may be aggravated by alcohol, barbiturates, narcotics). Necrotizing vasculitis, paresthesias, icterus, noreatilis, xanthopsia and respiratory distress including pneupitis and pulmonary edema, transient blurred vision, sialades, and vertigo have occurred with thiazides alone. Triamterene s been tound in renal stones in association with other usual culus components. Rare incidents of acute interstital nephritis ve been reported, impotence has been reported in a few ients on 'Dyazide', although a causal relationship has not an established.

pplied: 'Dyazide' Is supplied in bottles of 1000 capsules; igle Unit Packages (unit-dose) of 100 (intended for institunal use only); in Patient-Pak™ unit-of-use bottles of 100.

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Clinical Oncology Center Methodist Hospital of Indiana, Inc. New information from Indiana Division American Cancer Society, Inc. 4755 Kingsway Dr., Suite 100 Indianapolis 46205

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PE Materials Catalog

An updated Indiana Division Professional Education Materials catalog is now available for circulation. This catalog can be used by Unit Professional Education Chairs in planning their audiovisual and material needs for Professional Education programs.

These may be ordered through the Division Office Distribution Department. The complete title should be specified.

Source Book for Nurses

The Cancer Source Book for Nurses has been reprinted by National and is available for distribution once again. Units are asked to submit new orders to the Distribution Department, specifying Code #3010. Back orders will not be filled. The Source Book provides an overview of the dynamic field of Cancer Nursing. There are sections about the broader aspects of cancer . . . its epidemiology, pathogenesis, diagnosis and treatment. Also included are sections on cancers of specific sites and their specific nursing care, the emotional impact of cancer, and relevant resources available to cancer patients.

It is recommended that units distribute this handbook to nurse generalists and nursing students, as well as to oncology nurses and cancer centers. This Source Book can be effectively used in professional education as a reference publication in preparation for a hospital based in-service program for RNs and students.

There is a 65° charge per copy for this publication for bulk requests (over 10 copies).

IAL Voice Rehabilitation Institute

The 24th IAL Voice Rehabilitation Institute will be held June 24 through July 1 at the University of San Diego, San Diego. Interested laryngectomees and speech pathologists can register through Ms. Merle Irvin, Senior Speech Pathologist, Communicative Disorders Center, UCSD Medical Center, 3320 Third Ave., San Diego 92103.

Other News for Laryngectomees

The American Telephone and Telegraph Company (AT&T) reports that a new National Special Needs Center is now open to serve laryngectomees and others needing special communications equipment.

Joseph B. Heil, Jr., a district manager for the new center, says laryngectomees with questions on the new Bell Larynx #5C or repairs on older models may call

Nutrition and Cancer

People throughout the country. because of their interest in the relationship between nutrition and cancer, have been turning to the ACS for authoritative answers. To offer guidance to spokespeople for the society, the National Board recently approved the updated position statement, Nutrition and Cancer: Cause and Prevention, which provides the most reliable information now available. Although no concrete dietary advice can be given that will guarantee prevention of any specific human cancer, there are today inferential scientific data sufficient to help reduce one's chances of getting cancer.

Major ACS recommendations take the form of seven guidelines: avoid obesity; cut down on total fat intake; eat more high fiber foods, such as fruits, vegetables, and whole grain cereals; include foods rich in vitamins A and C in the daily diet; include cruciferous vegetables such as cabbage, broccoli, Brussels sprouts, kohlrabi and cauliflower in the salt-cured, smoke and nitrite-cured foods.

Much of what has been learned has come from three methods of investigation: epidemiologic evidence, laboratory studies with animals, and identification of cancer causing chemicals and determining their ability to cause mutations. As new information is obtained from research, the society's recommendations will be changed accordingly.

toll-free, 800-233-1222.

Mr. Heil reminds owners of the 5A and 5B that, although those models are no longer being manufactured or sold, repair service will continue. The fee will be higher than the old \$5 flat rate, and will be determined by actual present-day costs.

Mammography Guidelines

In June 1983, the American Cancer Society modified its guidelines concerning mammography's role in the detection of breast cancer in asymptomatic women age 40 to 49.

The American Cancer Society is now recommending the following: That the Cancer-Related Checkup Guidelines for breast cancer detection be modified for asymptomatic women age 40 to 49 years. Women in this age group should have a physical examination of the breast annually, and mammography should be performed at intervals of one to two years.

This statement is now available as a Professional Education Publication from the Division Office Distribution Department, Code #3368.

New Publication: The Scientific Basis for Carcinogen Detection and Primary Cancer Prevention

Dr. 1. Bernard Weinstein, Professor of Medicine and Environmental Sciences at Columbia University, is "confident that important strides can be made in cancer prevention if we focus greater attention on the problem of environmental carcinogenesis."

Dr. Weinstein discusses approaches currently used to detect environmental carcinogens—clinical and epidemiologic studies, animal bioassays, and short-term in vitro tests—and he critically evaluates the advantages, limitations, and reliability of these methods. Problems encountered in extrapolating laboratory findings to risks for humans are emphasized.

Additional copies may be ordered through the Division Office Distribution Department, Code #3321.

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DIAGNOSES Unlike typical computer management companies, we never

start by presenting a service and trying to shoehorn it into your medical office.

Actually, we offer so many services that our first question will be: "What do you really need?"

Then let's sit down and list your billing needs, collection needs, insurance processing needs, management reporting needs, appointment scheduling needs, general business needs, and medical reporting needs.

Together, we'll also clarify what you don't need. Only then can an efficient, costeffective program be chosen for your

CONSULTATIONS In plain
English, not computer or management jargon, we'll explain how to
strengthen your financial control. For
example, we can help you design more
effective statements, collection notices, and
routing slips.

medical office.

Please remember that, while we are always available, we do not make excessive demands on your time. The idea is not to take time, but to save time. Our goal is to free your staff to devote more time to patients and less to paperwork.

deserves the of care.

PRESCRIPTIONS We prescribe only what you really need. Maybe it's a service bureau relationship to get your bills out. Maybe it's your own IBM Personal

Computer. Maybe it's a sophisticated in-house system. Maybe it's an instant hook up with computers at Wausau that lets you launch a billing cycle without addressing an envelope or licking a stamp.

PROGNOSES Your prognosis should be excellent. We serve more than 400 medical offices in 30 states, and they

are reporting results such as these:

"Swifter cash flow." "Stronger financial control."
"No month's end billing rush." "Improved collection rate." "Reduced number of lost charges."

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PUBLIC WEALTH MOTES

New information from Office of the Commissioner Indiana State Board of Health 1330 W. Michigan St. Indianapolis, Ind. 46206 317-633-8400

A 1984 update will expand the Indiana Plan for Health to include a physical fitness goal.

Indiana State Board of Health officials recommended the addition of the new goal and several revised goals following a statewide assessment of health needs. The assessment revealed the need to increase interest in every age group for physical fitness and exercise.

The five-year State Health Plan was developed in 1982 by the State Board of Health's Office of Health Planning and Policy Development. The Plan formulates state policies and programs to influence allocation of approximately \$6 billion spent annually for health-related services in Indiana. The latest update will be included in the Health Plan's fourth edition.

The State Health Plan establishes 28 health goals, 84 objectives, and 192 recommended actions to improve the health of Indiana citizens and the overall health system in the state.

The Plan is implemented by the State Board of Health with assistance from a combination of more than 50 primary implementors which include other state agencies and private sector groups.

The Plan is monitored yearly by the State Board of Health and the implementors of the Plan's recommended actions. Each recommended action and goal is reviewed by several advisory groups and the public before it is considered for the overall State Health Plan.

While evaluating the Plan, officials found that all 28 health goals were on schedule. Further, evaluators discovered 90 percent of the Plan's 84 objectives were being achieved, and little modification was needed to redirect objectives that were off-the-mark. Also 85 percent of the recommended actions to reach health goals were being met. Those recommended actions which were off-target simply needed the allocation of additional resources to redirect them, the Plan says.

A tocus on physical fitness for children, adults, and the elderly is proposed in the updated Plan. Implementors hope to rechannel awareness of physical fitness to promote health and reduce illness. A statewide exercise education program on the benefits of fitness is proposed to include: upgraded fitness programs for school-age children and teens, incentives to help industry to promote fitness among its workers, and the promotion of exercise and fitness programs for the elderly.

The Plan's violence reduction section also has been updated to detect a broader spectrum of violent behavior. The Plan promotes the reduction of the incidence and prevalence of violence through various prevention, detection and treatment services. The program would emphasize services for several acts of violence including: child abuse, homicide, suicide, drug or alcohol related behavior, rape, elder abuse, and domestic violence.

Besides the addition of the fitness goal and the update to the violence goal, revised objectives and recommended actions also have been included in the fourth edition of the Plan. A list of major changes to the Plan follows:

Infants

Decrease preventable maternal deaths in the state to no more than five per year; maintain a maternal mortality committee to review all reported maternal deaths in the state; and develop coordinating mechanisms for follow-up and referral of families with apnea babies.

Children

Instigate a prevention program to reduce communicable diseases, and maintain and implement the child safety seat law.

Adolescents and Young Adults

Conduct vision screening in the preschool population and enhance the quality of vision screening by providing inservice training for preschool and school health personnel, and complete a comprehensive evaluation of ocular health of nursing home residents in selected nursing homes in the state.

Adults

To decrease the state mortality rate from lymphatic and hematopoetic tissue cancer to no more than the five-year mean of 17.0 per 100,000; reduce the non-cancer, non-TB overall lung disease mortality rate from the five-year mean of about 51.0 to 49.0 per 100,000; and complete a dental health assessment survey of a sample adult population (age 20 and over) to determine the prevalence of dental disease, the need for dental services, and the numbers and types of dental personnel needed to provide such services.

Also, conduct a statewide screening of the aged population in nursing homes (age 60 and over) to ascertain the need for dental services, and provide a program of education on oral health and dental disease prevention for the adult population.

Older Adults

Provide an array of community-based health promotion programs that foster independent living, and maintain a statewide network of support groups to assist individuals and families who are coping with Alzheimer's disease.

Home Health Care

Proposes that all Indiana citizens should have services available by licensed and/or certified home health agency that provides a range of health services appropriate to their needs.

Because of their excellent performance and record of accomplishments of the plan thus far, implementors discovered only minor revisions were needed in the update. The Plan effectively documents major health interests within the State of Indiana.

The Plan successfully pools health aspects of state-level plans and the plans of private entities into a statewide effort to improve the health of the citizens of Indiana.

For more information, contact the Indiana State Board of Health's Office of Health Planning and Policy Development at 317/633-8512.

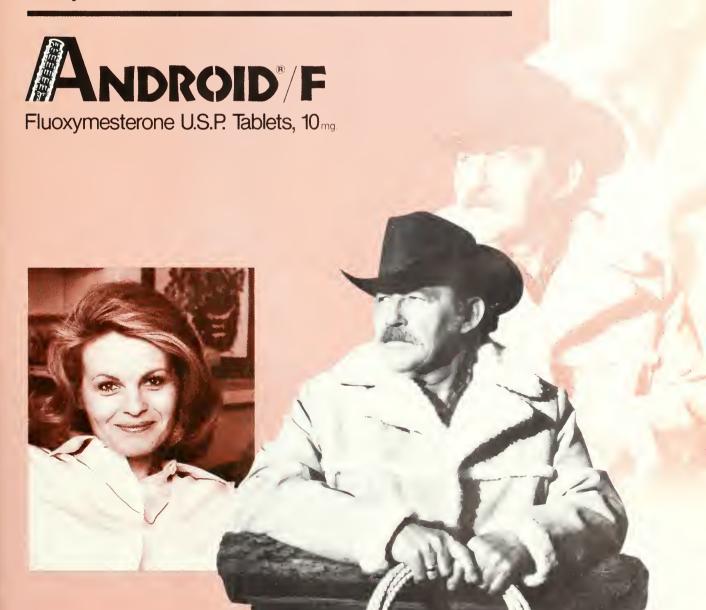
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I.U. STUDENT FORUM

Managing Medical Misconceptions: The Medical School Triage and Training of Doctors

"Aggressive, competitive, narrow, dishonest, unfriendly individuals—in other words, nerds." That's how medical students were perceived in a recent survey conducted by a Stanford medical professor. This perception of medical students, held by some people both inside and outside the medical profession, may be formulated in pre-medical years or during medical school; unfortunately, it may also color how patients view their own doctors and/or the medical profession as a whole.

TIME Magazine recently stated,* "Patients gripe that the products of 'the medical school regimen,' the current crop of doctors, have no compassion, run their practices like assembly lines, and are more fascinated by tests and procedures than by the human beings they treat."

"I believe the idea that all pre-meds are flawed is a bum rap," says Dr. George Lukemeyer, executive associate dean and chairman of the Admissions Committee of Indiana University School of Medicine. On the contrary, he says, the vast majority of LU. medical students exhibit very broad backgrounds, multiple talents, and good interpersonal skills.

Where, then, do these misconceptions arise? Dean Lukemeyer, who is also president of the Indiana State Medical Association, notes that part of this problem may be attributable to a communication gap between admissions committees, pre-med advisors and pre-med students concerning required and recommended courses, competition, grade requirements, and desirable personal attributes. Inadequate or inaccurate information supplied to pre-med students could obviously affect how these students interact with and are viewed by their peers.

Admissions committee members have the difficult job of gaining a "total perspective" of each applicant's individual attributes, unique background, and personal experiences. Judgments must be made of each applicant's potential to survive medical school—not necessarily his/her potential to be a "good doctor," but the ability to take on challenges, to work hard and to persevere in his/her endeavors. In a manner of speaking, this is a process of TRIAGE. It has been found that the best correlation of success in the first two years of medical school is the student's accumulative grade point average. The Medical College Admission Test scores serve as an additional aid in evaluating the applicant's academic potential.

Admissions committees carefully review each student's transcripts, noting the course level and degree of difficulty and the balance between science and non-science coursework. Non-academic traits and characteristics are ascertained from the applicant's

Story by Allison Vidimos and Brad Bengtson, Indiana University medical students and members of the Editorial Board of *Indiana Medicine*

* TIME Magazine, March 23, 1983, "Med School, Heal Thyself." The authors cite the article, which deals with medical school admission criteria, medical school curriculum, and present and future physicians, as an editorial source for the reader's information only. Portions are quoted with the permission of TIME.



personal autobiography, letters of recommendation and personal interviews. Attributes that Dr. Lukemeyer considers to be important are "basic integrity, maturity, true caring attitude, communication skills, motivation, and sense of humor." He also recognizes that admission committee decisions are not infallible. Any career that is viewed as highly desirable, lucrative or influential, be it business, politics, law, or other professional occupations, will attract some "bad eggs," who, in addition to superior academic credentials, have acting ability as well. Medicine isn't immune.

On the curriculum issue, there seems to be a general consensus among students, faculty and ad-

present medical training and practice is going to be constantly updated and expanded. This dynamic and progressive nature of medicine necessitates motivation, commitment, versatility, and a positive attitude on the part of medical students, faculty and practicing M.D.s.

There are as many theories as to what should be done to improve medical education and the selection and development of truly patient-oriented physicians as there are deans and administrators. States *TIME*: "The common aim of all efforts to reform medical education is to allow students more time to absorb and reflect upon what they learn and more freedom to pursue personal interests."

Medical Students Have to be Lifelong Learners. . .

ministrators that the medical school curriculum has an inherent overabundance of information to be assimilated during the classroom and clinical coursework and experiences. This realization has prompted various medical schools to consider cutting down their curriculums or lengthening class time spent learning the basic sciences. "The overload is real. When I was in school, we had to learn a lot about less; now we have to learn a lot about a lot!" Dr. Lukemeyer declares.

To outline the deficiencies of medical school education, the purposes of medical education must first be defined. Dr. Walter Daly, dean of Indiana University School of Medicine, views the four years of medical school as a "stepping stone in the medical education process," and as a preparation for a residency program. The situation today is vastly different from that of 30 years ago when a majority of newly graduated M.D.s either went directly into practice or completed only one year of internship. Nearly all M.D. graduates today undergo a three-to seven-year residency program. "Thus," says Dr. Daly, "I find it hard to get very excited about the gaps that the medical school curriculum may have; students just have to run as fast as they can, bite off as much information as they can, and chew more later!"

In the *TIME* article, August Swanson, director of Academic Affairs at the Association of American Medical Colleges, states, "We have to teach our students to be lifelong learners and give them the conceptual knowledge and study skills that allow them to keep up." It is important to realize that the clinical and basic science knowledge learned in

In November 1984, the Association of American Medical Colleges will announce general recommendations on medical education based on a three-year, \$1 million survey in an attempt to identify education needs and "make the educational process less brutal." The Education and Curriculum Committee of Indiana University School of Medicine, in response to the evident overabundance of information in medicine, has made several recommendations concerning computer-assisted instruction at all levels of the medical school curriculum. They have recommended that the Medical Educational Resources Program (MERP) be given responsibility for the instructional design and authoring support to faculty. Of equal importance to developing this and the various new educational tools is the faculty's interest and support for the new programs as well as their willingness to nurture truly compassionate, sympathetic, and professional attitudes in future physicians.

Besides improving medical education, squelching the misconceptions of the medical school admissions process should also be a priority. Statistics revealed at the 1980 Rockefeller Foundation conference, "The Liberal Arts in Premedical Education," should help pave the way: "A concerted effort must be made to inform undergraduates and high school students that the medical profession is so diverse it can benefit from a variety of backgrounds and interests; that the odds of gaining admission to medical school are relatively good (slightly over 50%); and that liberally educated undergraduates are at no disadvantage either in the admissions race or in medical school performance."

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An Update on the Hyperlipidemias and Atherosclerosis

RICHARD C. POWELL, M.D.*
Indianapolis

HE HYPERI IPIDEMIAS are commonly encountered metabolic disorders of interest to clinicians because of their association with 1) premature and/or accelerated atherosclerosis, 2) recurring attacks of abdominal pain (hypertriglyceridemia and pancreatitis) and 3) xanthomas. This update will focus on the hyperlipidemias and atherosclerosis.

Are Lipids Important in the Atherosclerotic Process?

Although the so-called "Lipid Hypothesis" has been around for a long time, definitive answers still are not available at this writing. However, there is increasing evidence that plasma cholesterol is important in the pathogenesis of atherosclerosis. Atherosclerotic plaques contain lipid derived from plasma, and cholesterol is the predominant lipid. Epidemiological studies indicate that populations with high plasma cholesterol levels also have an increased incidence of coronary artery disease.

Atherosclerosis can be produced in experimental animals, including non-human primates, by feeding diets that cause hypercholesterolemia. Most convincing, perhaps, are the many clinical observations that patients with familial hypercholesterolemia develop premature and/or accelerated atherosclerosis. Thus, the evidence linking cholesterol and atherosclerosis is stronger than ever. There also is evidence linking plasma triglycerides and atherosclerosis, but the connection—is indirect and less convincing."

Will Treating Hyperlipidemia Decrease the Risk of Clinical Atherosclerosis?

In spite of increasing data to support the Lipid Hypothesis, it has been difficult to demonstrate that lowering plasma lipids will reduce atherosclerotic plaque size or decrease the clinical sequelae such as coronary heart disease. Plaque regression has been shown in non-human

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^{*} Professor of Medicine and Biochemistry

		TABLE Plasma Lipo _l			
Liper Interrigibili	C1 pamilion 1	VEDU Very or her ty Incorater)	it' : Intermediate Den : ; Lipoproteins)	LDL Topproteris	HDL High Density Lipoproteins
)⊬ir ity	< 11 H	< 1 14.	* 006 1 (19	1 119116;	1 063-1 21
Viron and	fing veens	Triglycerides	Cholestero ester and triglycerides	Chale teral - F-1	nuestero and
lectropia of the Py	right	Pre bet i	Brcad beta	Beta	Acria
Аррельние селите	Cream liyer il 1 r	Uniform turbidity	Slightly turbid	Clear	Cear
ac II) e	Detaily full onter tine)	Dietary carbohyd ate	Remnants of VLDL	Remnants :	liver and
	Transport : ' exogenous trig/sceride	Transport of endogenous triglycerides	Transport of cholesterol	Transport of cholesterol to extrahepath, thesue-	Transport of cholesterol from extrahepatic *s-ue
Metatoria Ente	Chylomicron remnants after Evidiolysis of triglycender and up take of fatty acids in extrahepatic tissues. Chylomicron remnants are taken up by the liver	IDE after hydro ysis of trig vi erides and uptake of fatty acids in extrahepatic tissues	LDL after interaction with HDL	Degradation in extrahepatic tissues and liver	Transfer of lipids and apolipoproteins to other lipoprotein and degradation in liver

primates and in humans to a limited extent. Until recently, however, most prospective lipid-lowering intervention trials have not shown significant reductions in coronary heart disease or other clinical events related to atherosclerosis. One reason for failure may have been that treatment did not lower lipid levels sufficiently; another, that clinical events may be insensitive indicators for the progression or regression of atherosclerotic plaques.

Three recently reported clinical studies deserve individual comment; two suggest a reduction in clinical atherosclerosis is possible. The Oslo Heart Study was a prospective randomized study of "high risk" but normotensive men.² Cholesterol was reduced an average of 13% by diet, and smoking was decreased 45% by counseling in the intervention group. The incidence of myocardial infarction and sudden death was reduced by 47%.

The larger Multiple Risk Factor Intervention Trial results were inconclusive. More than 60% of the high risk men in this study were hypertensive, and intervention focused on antihypertensive drug treatment as well as diet to reduce cholesterol and education regarding smoking. However, the usual care or con-

trol group reduced their risk factors also, so differences between the two groups were minimal.

Another problem was that a sub-group of patients treated with antihypertensive medication had a higher mortality than non-hypertensives. Reasons for this mortality difference remain speculative at this time. Do some currently prescribed medications aggravate other risk factors while lowering blood pressure? Diuretics decrease blood pressure but they also deplete potassium and in some individuals can increase plasma triglycerides and/or cholesterol.

Some beta blockers also can adversely affect lipids by increasing triglycerides and lowering high density lipoprotein cholesterol, but the changes usually are minimal. It is hoped that new information will soon become available to help answer this important question about antihypertensive medications.

The recently reported Lipid Research Clinics Coronary Primary Prevention Trial provides the most convincing evidence so far that cholesterol-lowering treatment can reduce the incidence of coronary heart disease. This was a large multicenter study of more than 3,800 asymptomatic middle-aged men with

plasma cholesterol levels above 265 mg/dl. Subjects were followed seven years or more.

The treatment group received a cholesterol-lowering diet and cholestyramine, a cholesterol-lowering anion exchange resin that sequesters bile acids. The control group received the same diet plus placebo. When the cholestyramine-treated group was compared with the control group, a 19% reduction in coronary heart disease risk was achieved with an average 8% decrease in plasma total cholesterol. A 50% reduction in coronary heart disease incidence was observed in men who lowered their cholesterol levels 25% when compared with men whose cholesterol levels were unchanged.

In a coronary intervention study reported this year, a decrease in the progression of coronary artery stenosis was determined by angiography in hypercholesterolemic patients treated with diet and cholestyramine. Even regression of atherosclerosis was demonstrated in some subjects.

Thus, there is new evidence from clinical, prospective, lipid-lowering intervention trials to suggest that treatment of hypercholesterolemia can retard atherosclerosis and its clinical sequelae.

				TABLE 2 n of the Hype	rlipoproteinemia	s	
	Туре	Appearance of Plasma	Cholesterol (C) Triglyceride (T) Content	Lipoprotein Electrophoresis	Associated Laboratory Findings	Clinical Features	Therapy
1	Fat-induced (Exogenous) Hypertri- glyceridemia	Cream layer on top, clear below	C + T + + + +	Origin	Low PHLA (post heparin lipolytic activity)	Rare, Onset-child- hood Abdominal pain Hepatosplenomegaly Eruptive xanthomas Lipemia retinalis	Low fat diet Medium chain triglycerides
II a	Hyper- cholesterolemia	Clear	C++++	Beta	Increased LDL	Common, Onset-all ages Premature vascular disease Tendon and tuberous xanthomas	Low saturated fat and low cholesterol diet Cholestyramine- Colestipol
ΙΙb	Hypercholes- terolemia with Carbohydrate- induced Hypertriglyceri- demia	May be slightly turbid	C++++ T++	Beta and pre-beta	Increased LDL and VLDL	Common, Onset-all ages Premature vascular disease Tendon and tuberous xanthomas	As in II a plus Weight Control Carbohydrate restric- tion Clofibrate or gemfibrozil
111	Broad beta disease or Dysbetalipo- proteinemia	Usually turbid	C + + + T + + +	Broad beta	Increased IDL and Chylomicron remnants Apo E abnormality	Uncommon, Onset- adults Premature vascular disease Palmar and tuberous xanthomas	Weight control Low carbohydrate. low saturated fat and low cholesterol diet Alcohol restriction Clofibrate
IV	Carbohydrate- induced (Endogenous) Hypertriglyceri- demia	Usually turbid	C + T + + +	Pre-beta	Glucose intolerance Hyperuricemia	Common, Onset- Adults Premature vascular disease-Eruptive xanthomas Obesity Hepatomegaly	Weight control Low carbohydrate diet Alcohol restriction Clofibrate or gemfibrozil
V	Mixed Hypertriglyceridemia (Carbohydrate and Fat-induced)	Cream layer on top, turbid below	C + T + + + +	Origin and Pre-beta	PHLA may be decreased Glucose intolerance Hyperuricemia	Usually adults Abdominal pain Hepatosplenomegaly Eruptive xanthomas Lipemia retinalis	Weight Control Low carbohydrate low fat diet Nicotinic acid Norethindrone acetate

Apoproteins, Lipoprotein Receptors and the Lipoprotein Transport System

Lipids circulate in plasma as macromolecular lipid-protein complexes called lipoproteins. They contain a core of nonpolar lipids (triglycerides and cholesterol esters) surrounded by the more polar lipids (phospholipids and free cholesterol) and specific proteins called *apoproteins* or apolipoproteins. Recent studies have demonstrated that apoproteins are important in maintaining lipoprotein structure, and in regulating lipoprotein metabolism.⁷

Some aproproteins such as Apo B and Apo E interact with specific cell surface

lipoprotein receptors found in liver and a variety of extrahepatic tissues. These aproproteins, then, direct lipoproteins to appropriate sites for metabolism. Other aproproteins activate enzymes that enhance lipoprotein metabolism; for example, Apo A-1 activates LCAT (lecithin-cholesterol acyltransferase), the enzyme that catalyzes cholesterol esterification, and Apo C-II activates the enzyme lipoprotein lipase which liberates fatty acids from chylomicrons and very low density lipoproteins (VLDL).

The hyperlipidemias or hyperlipoproteinemias are a heterogenous group of disorders characterized by elevated plasma levels of one or more of the lipoproteins. Increased levels of at least three lipoproteins appear to be atherogenic—low density lipoproteins (LDL), intermediate density lipoproteins (IDL), and chylomicron remnants. 1.8 All are involved with the transport of cholesterol esters to both hepatic and extrahepatic tissues. Increased levels of high density lipoproteins (HDL) are anti-atherogenic. Chylomicrons are neutral and very low density lipoproteins (VLDL) are either neutral or weakly atherogenic. Characteristics of the major lipoprotein classes are shown in *Table 1*.

Mechanisms by which lipoproteins ac-

celerate atherosclerosis are not known. Both genetic and environmental factors are involved with the hyperlipidemias, and other factors also are important such as platelets, arterial wall endothelial and smooth muscle cells, macrophages, hypertension, cigarette smoking and diabetes mellitus.

Recent studies have shed some light on pathogenesis in two groups of hyperlipidemic patients.8 One group with Familial Hypercholesterolemia has an inherited defect in LDL receptors which prevents the normal cellular uptake and metabolism of LDL. As a result LDL accumulates in plasma and synthesis of cholesterol within cells is not suppressed by LDL uptake. Another group with Familial Dysbetalipoproteinemia (Type III or Broad Beta Disease) has an inherited defect in Apo E which results in chylomicron remnants and IDL that do not bind normally to hepatic lipoprotein receptors. Thus, chylomicron remnants and IDL accumulate in plasma and cholesterol synthesis in the liver is not suppressed. As more is learned about the lipoprotein transport system including apoproteins and lipoprotein receptors, a better understanding of lipids and atherosclerosis should result.

Lipid Screening Tests

Total cholesterol, HDL cholesterol and fasting triglycerides are three blood tests that are easily performed and reasonably priced in most clinical laboratories. 9.10 These tests are currently recommended as lipid screening tests to identify patients at increased risk for clinical atherosclerosis. Cholesterol contained in LDL is the cholesterol fraction most strongly identified with atherosclerosis; however, it is difficult to measure, so total cholesterol is used as an approximation. Because most of the circulating cholesterol is contained in LDL, the values do correlate fairly well. Furthermore, it is possible to calculate LDL cholesterol from the three lipid screening tests as noted below. Quantitative analyses of lipoproteins and of apoproteins are more difficult and are not widely available at this time.

Total Cholesterol: Plasma total cholesterol levels increase with age, at least in the United States, and they are higher in men than women up to age 50. In post-menopausal women, however, cholesterol levels are comparable to men. There is no clear-cut distinction between normal and abnormal values. As a generalization, hypercholesterolemia is more strongly associated with clinical atherosclerosis in the younger age groups, and the higher the level the stronger the correlation.

HDL Cholesterol: HDL cholesterol (cholesterol contained in HDL), or alpha cholesterol, is a relatively new test. Unlike LDL cholesterol, HDL cholesterol is easy to measure. This fraction normally constitutes about 20 to 25% of the total. HDL cholesterol concentrations are higher in women than in men and do not change significantly with age. Again, there is no clear-cut distinction between normal and abnormal, but HDL cholesterol levels are inversely associated with accelerated atherosclerosis; that is, low levels suggest an increased risk of clinical disease. Furthermore, HDL cholesterol levels appear to be more predictive of coronary heart disease than the other more familiar lipid risk factors, total cholesterol and fasting triglycerides. A total cholesterol, however, is needed along with HDL cholesterol for proper interpretation because the percent of total is important in addition to absolute values.

Fasting Triglycerides: Triglyceride levels fluctuate with meals and, therefore, should be measured only after an overnight or 12-14 hour fast. Fasting triglyceride levels increase slightly with age, are higher in men and also show no distinct separation between normal and abnormal. Hypertriglyceridemia may result from increased chylomicrons (fat-induced hypertriglyceridemia) or VLDL (usually carbohydrate-induced hypertriglyceridemia); these types can be distinguished from each other by lipoprotein electrophoresis of plasma obtained in the fasting state. Chylomicrons remain at the origin; VLDL migrates to the pre-beta position. Also recall that chylomicrons form a cream layer on top of plasma if

allowed to stand refrigerated overnight, while VLDL forms a diffuse turbidity (*Table 1*).

Calculated LDL Cholesterol: LDL cholesterol can be estimated according to the following formula if triglyceride levels are not elevated above 400 mg/dl:

LDL Cholesterol =

Total cholesterol-(HDL cholesterol + Triglycerides divided by 5)

Primary vs. Secondary Hyperlipidemia

Once hyperlipidemia is detected, it is important to determine if the abnormal triglyceride and/or cholesterol concentrations are secondary to diseases such as diabetes mellitus, hypothyroidism, dysproteinemia, nephrotic syndrome, pancreatitis, alcoholism, obstructive liver disease, etc. If so, treatment should be directed toward the underlying disease. Successful control of diabetes mellitus or hypothyroidism, for example, will usually improve the associated hyperlipidemia.

If there is no underlying cause, primary hyperlipidemia or hyperlipoproteinemia should be considered. A familial basis can be established by testing the patient's blood relatives. Typing or classifying the primary hyperlipoproteinemias is helpful because clinical features and therapy differ. Currently, lipid disorders are classified into six types based primarily on fasting triglyceride and cholesterol concentrations, and on lipoprotein electrophoretic patterns if triglycerides are increased. Diagnostic criteria are listed in Table 2 along with associated laboratory findings, clinical features and recommended therapy.

Do not equate lipoprotein typing with specific disease entities, since each type may include multiple etiologies and both primary and secondary hyperlipidemias. This classification is a means of expressing pathophysiology but not etiology. Nevertheless, after secondary hyperlipidemias are excluded, typing is helpful in planning treatment.

Treatment

Therapy for the primary hyperlipidemias involves dietary management first and then drug therapy if needed. In addition, other correctable risk factors for

atherosclerosis should be treated such as eigarette smoking and hypertension.

Dietary Management begins with control of total Calories to achieve and maintain an ideal body weight.9 Although sometimes difficult to accomplish, it is the single most important intervention for all types of hyperlipidemia. For hypercholesterolemia, a reduction in dietary fat is recommended, especially saturated fats and foods rich in cholesterol. Thus, patients should use only skim milk dairy products and lean meats in order to reduce saturated fats, and they should restrict the use of eggs, shellfish and organ meats such as liver to decrease cholesterol intake. Increasing dietary fiber by consuming more whole grain products, fruits and vegetables may also be helpful.

If carbohydrate-induced hypertriglyceridemia is the primary lipid disorder, weight control often is sufficient. If not, carbohydrates (especially sucrose or table sugar) and alcohol should be restricted. Some patients have a mixed hyperlipoproteinemia with increased cholesterol levels and carbohydrate-aggravated hypertriglyceridemia. The instructions outlined above for cholesterol and triglycerides then both apply. Fat-induced hypertriglyceridemia (hyperchylomicronemia) requires a severe restriction in all dietary fat, but first consider again the possibility that this represents a secondary hyperlipidemia since primary familial fatinduced hypertriglyceridemia uncommon.

If patients are hypertensive, a threegram sodium restriction also should be included in the diet prescription. Initially, the results of dietary management should be monitored with fasting plasma triglyceride and cholesterol levels at six to eight week intervals.

Drug Therapy can be added if dietary management is not sufficient. For hypercholesterolemia, cholestyramine or colestipol are considered the drugs of choice by many at this writing. Both are anion exchange resins that bind bile acids, thereby enhancing cholesterol excretion. These drugs usually lower cholesterol levels about 20 to 30%. They are relatively safe, but sometimes patient acceptance

is limited. Their cholesterol-lowering effectiveness can be enhanced by adding a second drug such as nicotinic acid or probucol.

Patients with hypertriglyceridemia or mixed hypercholesterolemia-hypertriglyceridemia have received clofibrate as the drug of choice for years. However, recent information has decreased the enthusiasm of many for treating hypertriglyceridemia with drug therapy.¹⁰

First, the risk of clinical atherosclerosis does not appear to be as great for many patients with hypertriglyceridemia as it is for those with increased cholesterol. Second, dietary management usually controls hypertriglyceridemia if weight control goals are achieved. Third, a large prospective study of healthy men without hyperlipidemia compared clofibrate with placebo to see if clinical atherosclerosis could be reduced. A decrease in nonfatal myocardial infarctions was demonstrated in the clofibrate treated group; however, this group had a higher noncardiac mortality rate and an increased incidence of gallstones.

At present, clofibrate probably should be limited to those patients with significant hyperlipidemia thought to be at increased risk for complications related to the hyperlipidemia and not responsive to other therapy. Gemfibrozil is a drug with chemical, pharmacological and clinical similarities to clofibrate that has been marketed recently. It may prove to be a better alternative for hypertriglyceridemia. Nicotinic acid is effective in lowering triglycerides, but it also has side effects that limit its usefulness.

There is hope for more effective therapy in the near future because new and improved drugs are now being tested in humans. For example, a metabolite from a penicillin mold has been isolated recently that is a potent inhibitor of HMG-CoA reductase, the enzyme that controls cholesterol synthesis.¹²

In theory, combining a drug that suppresses cholesterol synthesis with one that increases cholesterol excretion could significantly improve therapy, and short-term studies support this idea. Thus, it should be possible soon to treat the hyper-

lipidemias more effectively, and further reduce atheroselerosis and its related clinical sequelae.

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Duchenne's Muscular Dystrophy: A Tissue Culture Perspective

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Abstract

One ramification of the metabolic abnormality in Duchenne's muscular dystrophy (DMD) is its propensity to produce intracellular lipid. This phenomenon is utilized as an indicator in the living cell (tissue culture) to identify the metabolites (and hence the enzymes) responsible for the phenomenon.

The controlling metabolite, adenylosuccinate, can pass cell and mitochondrial membranes and enter into the de novo synthetic pathway for the adenosine 5'-phosphates (AMP, ADP, and ATP). Since these substances are diminished in DMD, adenylosuccinate should have therapeutic value to the patient with this disease.

This technique provides the basis for a practical method of evaluating the integrity of some of the known metabolic pathways in living DMD tissue. The lipid not only reveals one ramification of the basic metabolic disorder, its visual presence makes it a sensitive indicator, thereby permitting the empirical search for the identity of and the relationship to the enzyme(s) responsible for the phenomenon.

Briefly, by addition of the appropriate amount of any given enzyme product (i.e., metabolite) to the cultures, its effect, if any on the amount of intracellular

FUNDAMENTAL METABOLIC dif-

ference between normal human

skeletal muscle and that from

Duchenne's muscular dystrophy (DMD)

is the propensity of the latter to produce

intracellular lipid. This lipid increases the

buoyancy of the DMD muscle fiber,

thereby reducing its specific gravity. By

measuring specific gravity, DMD fibers

can be distinguished from those of nor-

mal skeletal muscle. The lipid appears.

therefore, to be a clue to the key underly-

ing metabolic defect. Because of this, we

developed a tissue culture technique

which permits the phenomenon to be

demonstrated in vitro2 in cells from DMD

explants, but not in identically treated

cells from normal skeletal muscle. (Figure

I and Figure 2).

amount of any given enzyme product (i.e., metabolite) to the cultures, its effect, if any, on the amount of intracellular lipid can be demonstrated, and a judgment can be made as to the integrity of the particular portion of the metabolic pathway under study.

We postulate, from clinical and anatomical experience, that a significant malfunction exists along a major energy pathway; that in response to the demand for sustained muscular contraction, an essential metabolite is not produced in sufficient amount; that this metabolite is, however, present and ample in the resting

muscle. To compensate for the work-related deficiency, alternate pathways function at the expense of structure. The gradual loss of muscle stretch reflexes suggest this structure to be an elastic element (myosin?).

If these concepts are correct, then the addition in appropriate concentration of the correct metabolic product to the cultures should eliminate the intracellular lipid.

The biochemical abnormality alone does not account for clinical progression of disease. A number of muscles (e.g., vocal cords, extraocular muscles, inner ear muscles, facial muscles) can be shown to be biochemically abnormal (i.e., to have increased intracellular lipid), yet show no clinical indication of abnormality. At least two accelerating mechanisms are present which account for the clinical signs and the progressive character of the disease.3,4 One of these mechanisms is active, and the other, which is the most destructive, is passive. The active mechanism (sustained muscle contraction) is directly related to the biochemical abnormality; the passive mechanism, which is purely mechanical (pathological stretch of skeletal muscle), is not.

Impermeability of the cellular membrane to a number of metabolites is a recognized limiting factor with this tissue culture technique. Many substances, however, can penetrate membrane barriers; and in other instances transport, or shuttle mechanisms exist.

The present work is part of a long-term continuing combined clinic-laboratory study of this disease. The tissue culture aspect commenced with a study of the metabolites of glycolosis, and proceeded from there through Krebs tricarboxylic acid cycle, and then into other areas. The present work is limited to two metabolites which explain the lipid phenomenon:

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FIGURE 1: Field of normal myocytes fusing to form myotubes, showing absence of intracellular lipid. (Oil red "O" x 175).

FIGURE 2: Multinucleated cell (probable myocyte) from DMD. Note intracellular lipid. (Oil red "O" x 250).



FIGURE 3: Multinucleated cell (probable myocyte) from DMD, showing effect of 0.03 molar solution of isocitrate on quantity of intracellular lipid. (Oil red "O" x 250).



FIGURE 4: Field of DMD myocytes fusing to form myotubes, showing absence of intracellular lipid through action of 1.2 x 10% molar solution of adenylosuccinic acid. (Oil red "O" x 200).

isocitrate from Krebs cycle, and adenylosuccinate from the de novo synthesis of adenosine 5'-mono, di, and triphosphate (AMP, ADP, and ATP).

Method

The integrity of any given enzyme system is evaluated by noting the effect, if any, of adding a small amount of the metabolite normally produced by that enzyme on the quantity of intracellular lipid in the DMD subcultures. For each enzyme to be studied, the reaction product of the enzyme is previously tested with cultures

of normal human skeletal muscle, to which varying concentrations of the metabolite have been added. The purpose of this initial step is to determine empirically the concentrations necessary to produce trace and toxic doses, so as to be able to interpret the effect, if any, on the DMD cultures.

A series of normal and DMD skeletal muscle cultures is then prepared in Leighton tubes, as previously described.² To each normal-dystrophy pair the identical concentration of the metabolite being evaluated is added. Sufficient pairs are

set up to include the trace and toxic concentrations, in addition to intermediate values. Also, for control, one pair is processed to which no metabolite is added.

The cultures are then returned to the incubator for an additional 18 to 24 hours, after which time the cells are fixed in sodium phosphate-buffered formalin, stained with oil red "O", and then studied microscopically.

Krebs Tricarboxylic Acid Cycle

"... Krebs tricarboxylic acid cycle (is) the final common pathway into which all

of the fuel molecules of the cell . . . are ultimately degraded in catabolism."

All the metabolites in Krebs cycle have been evaluated in this study. The significant effect occurs with isocitrate at isocitrate dehydrogenase.

Addition of the trisodium salt of DL isocitric acid (Sigma*) in a 0.03 molar solution produces no visible effect on the intracellular lipid in the outgrowth of normal human skeletal muscle explants. Lipid appears with the use of a 0.06 molar concentration, and a 0.09 molar solution is toxic.

The outgrowth from DMD skeletal muscle explants shows a tremendous increase in intracellular lipid in response to the 0.03 molar concentration of isocitrate (*Figure 3*).

Distal to isocitrate dehydrogenase in Krebs cycle, the intracellular lipid content of DMD explants is reduced, but not eliminated by addition of optimal concentrations of most of the various metabolites. Addition of small amounts of citrate, however, increases the lipid, but not to the same extent as isocitrate.

This behavior suggests an impaired function at isocitrate dehydrogenase. A co-enzyme, nicotinamide adenine dinucleotide (NAD), is necessary for normal function. A shuttle mechanism is known to exist, which facilitates the activity of this substance across the membranes. We have found that addition of NAD to the cultures reduces, but does not eliminate the lipid. We interpret this to mean that isocitrate dehydrogenase is being influenced primarily by yet another pathway, and that the cause of the Krebs cycle dysfunction is to be sought outside Krebs cycle.

De Novo Adenosine Phosphonucleotide Synthesis

NAD-linked isocitrate dehydrogenase is a control point for lipid regulation, the regulation being achieved by the concentration of the modulator ADP, an increased amount of ADP routing isocitrate through Krebs cycle (less lipid) and a decreased concentration routing isocitrate into a lipid-producing pathway.

ADP will not cross membrane barriers, nor will AMP or ATP. Some of the precursor molecules in the de novo synthesis of these phosphonucleotides will pass, and among these is adenylosuccinate.

Addition of adenylosuccinate (Sigma) to the nutritional medium produces a very dramatic effect on the intracellular lipid of DMD cells at very low concentrations.

Addition of 1.2 x 10⁻⁶ molar solution eliminates the lipid from DMD cells (*Figure 4*). (No effect is noted in normal cells at this concentration.)

Comments

What we have done here is to investigate one ramification of an inborn error of metabolism, namely the predilection of DMD cells to form lipid. What we demonstrate here is an abnormality that is present in the living, noncontracting cell, which reveals an aberrant chemical bias at isocitrate dehydrogenase. What is the cause of this bias? The elimination of the lipid by addition of a trace amount of adenylosuccinate suggests the intracellular concentration of ADP to be responsible, that the phenomenon is exceedingly sensitive, and that the ADP concentration need be altered only slightly for this manifestation to appear or disappear. (It has long been known that AMP, ADP, and to a lesser extent, ATP, are diminished in this disease.)7

Our present study also suggests a significantly abnormal function at adenylosuccinate synthetase. Kay and Pearson8 have measured this enzyme spectrophotometrically in DMD but found no abnormality. Can this be rationalized with our observations in the living cell? We believe it can. Standard chemical procedures using human skeletal muscle measure values found in the resting state (the usual status of muscle at the time of biopsy), not that of a stressed situation. In our concept of the disease the primary metabolic error is associated with sustained contraction. In this regard adenylosuccinate is critically situated, both with reference to the de novo synthesis of AMP, ADP, and ATP, and with reference to its regulatory role in the purine nucleotide cycle. It appears that unlike the abnormality at isocitrate dehydrogenase, which is manifest even in the basal state, the abnormality at synthetase is dynamic. Like a carburetor stuck in the idling position, abnormal function would not be demonstrable in the idle state. A mechanism appears to function during sustained contraction in DMD which either limits the rate of enzyme synthesis, or suppresses the normal function of its metabolite.

The clinical course of DMD is characterized by a pattern of progression in which a number of abnormalities develop, some sequentially, some concurrently (swayback, enlargement of the calf muscles, differential wasting of the lower portion of the pectoralis major muscles, development of the talipes equinovarus deformities, etc.). What is not immediately evident is the interrelationship of these features, most relating directly to one key deformity, anterior rotation of the pelvis.³

With reference to the clinical chemistry, the disease also shows a variety of abnormalities. Serum creatine kinase and fructose-diphosphate aldolase are most impressive in terms of the elevated values encountered; but lactate dehydrogenase and aspartate and alanine transaminases, among others, yield abnormal values. As yet, a key enzyme defect has not been demonstrated to which these various ramifications relate, although logically there should be one.

Is the abnormality at synthetase the key defect? The question cannot be answered at this time, but it does direct attention to the role of AMP, ADP, and ATP as modulators of other enzyme systems, and particularly to ATP in its role in the maintenance of the phosphocreatine store (which becomes depleted in this disease); and with its role in maintaining the integrity of the muscle membrane (which 'leaks'' from the time of birth).

Regardless of whether or not the key metabolic error is working at synthetase, it does appear that this aspect of the disease is of practical importance clinically. It appears that adenylosuccinate, which is a substance normal to the body, has the ability to pass muscle and

^{*}Sigma Chemical Co., St. Louis, Missouri

mitochondrial membranes, and to enter the AMP-ADP-ATP pathway. If it could be given to the DMD patient (assuming no destruction or modification in the liver) it should have some effect in retarding the progress of the disease. How? By providing the energy phosphates which would otherwise be robbed from muscle structure, and thereby contribute to the clinical picture of muscle degeneration.

Addendum

The FDA has given consent for a pilot study of five volunteer Duchenne muscular dystrophy patients (with appropriate informed consent and institutional review committee procedures) using adenylosuccinate (IND 17, 848), and the Community Hospital Foundation of Indianapolis is underwriting the expense of having the drug custom produced for a limited clinical trial.

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Indiana Muscular Dystrophy Research

Is it possible from the clinical examination to gain insight into the nature of the biochemical defect in muscular dystrophy? Perhaps not directly, but certainly there are clues present that if followed may lead toward that end.

The preceding article, "Duchenne's Muscular Dystrophy: A Tissue Culture Perspective," is a case in point. This long-term research project resulted from a series of preceding studies that originated from the clinical observation that the pattern of skeletal muscle deterioration in Duchenne's muscular dystrophy (DMD) is remarkably uniform from patient to patient, although there is considerable variation in the rate of progression. This uniformity indicates the presence of pathophysiological mechanisms, the explantion of which should point toward the molecular target.

For any of the muscular dystrophies the pathway to the metabolic error can be followed by finding the answers to this list of fundamental questions:

- What is the anatomical distribution of the disease?
- What practical feature(s) distinguishes normal tissue from abnormal, and one degree of abnormality from another?
- How does the feature relate to the progression of the disease?
- How does the feature relate to the metabolic abnormality?

• What is the metabolic abnormality?

The answer to the first question can be obtained only by complete anatomical study. With DMD it was found that all skeletal muscles are abnormal, even those that never show a sign of clinical abnormality.

The second question was answered by measuring muscle fiber densities, and in turn this raised the question as to what accounted for the altered specific gravity of dystrophic muscle. Increased production of intracellular lipid was found to be the answer to this question. This in turn put emphasis on the tissue culture technic.

By following the same five fundamental questions with reference to the disappearance of the muscle stretch reflexes, information was gained as to which metabolic pathways to monitor. Even having this information and the appropriate tissue culture technic to do the job, a number of years were required to complete the study to the present point.

Now that an appropriate metabolite has been identified, the question remains as to the location of this particular metabolite in relationship to the fundamental inborn error of metabolism. Is it at the root of the problem, near a terminal branch, or somewhere in between? The clinical trial which is being sponsored by the Community Hospital Foundation should shed further light on this question.

Experimental Medical Devices, Drugs and Techniques

Their Future Social, Medical and Political Implications (Part 1)

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HILE LADMIT it is time to air and discuss the issue, clear cut answers are not available—only suggestions and they vary depending on the philosophy of the individual offering the suggestions.

Hippocrates said that the art of medicine "consists of three things: the disease, the patient and the physician." His concept of the art of medicine in his time was undoubtedly right but now must be expanded to include much more—the adept and scientific use of medicines, diagnostic and therapeutic equipment and procedures, ethics and coping with laws, rules and regulations of governing bodies whether that be local, state or federal government, or our own peer group associations and organizations.

During early preparation on this subject, I felt like the distinguished lawyer, Paul A. Freund, SJO, when he began to prepare for his article on "Ethical Problems in Human Experimentation." He

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said he felt like the hapless first-year floundering law student in a tough law professor's class. The professor asked a question and, as the student was attempting to respond, the professor interrupted him with, "You are in very shallow water, but you are sinking fast."

Professor Freund said that present laws dealing with our subject are very conservative. He quoted Justice Holmes that, "Continuity with the past is not a duty, it is a necessity." Professor Freund said you could apply to the laws the celebrated quotation of F. M. Cornford of Cambridge in his book Microcosmographia Academics: "The principle of the dangerous precedent is that you should not now do an admittedly right action for fear that you or your equally timid successor should not have the courage to do right in some future time . . . every public action which is not customary either is wrong or, if it is right, a dangerous precedent. It follows that nothing should ever be done the first time."

Professor Freund also said, "Not only is the law conservative, it is deeply protective of human integrity and life. An offensive touching or invasion of the body, if not consented to, is a trespass against the person, a battery, redressible in an action for damages . . . the governing principle, it might be said, is that man shall not play God with human lives. . . "

"The great traditional safeguard in the field of medical experimentation is the disciplined fidelity of the physician to his patient . . . first of all, do not do injury." Some early court decisions said, "That a physician experiments at his peril, but in their context these statements refer to

a doctor's departure from an accepted mode of treatment." Experimentation, however, involves one of several things: using therapy where there is no generally accepted mode of treatment; using medications, not for therapy, but to observe the results with the aim of improving therapy for others in the future; or use of non-patients as experimental subjects. "... The immediate welfare of the individual patient is the doctor's inner check and cannot be emphasized too strongly."

It should be mentioned that the British Medical Association in 1963 published a document formulating the physician's responsibilities and one point said, "Before a new drug is used in treatment, the clinician should ensure that the distributors of the drug are reputable and the claims made for the production include reference to independent evidence to its effects."

Another point in the document says: "The patient must never take second place to a research project nor should be given any such impression. Before embarking upon any research the doctor should ask of himself:

"Does the patient know what it is I propose to do?"

"Have 1 explained fully and honestly to him the risks I am asking him to run?"

"Am I satisfied that his consent has been freely given and is legally valid?"

"Is this procedure one which I would not hesitate to advise, or in which I would readily acquiesce, if it were to be undertaken upon my wife or children?"

We're in the age of medical miracles. News is full of stories about heart and liver and lungs and renal transplants, of mechanical hearts and new diagnostic tools.

There are two sides to this miracle medicine. One has to have reverence and awe for the skill, the boldness, competence and humanitarian efforts of those in the health care profession. This includes the innovative inventors and manufacturers of new instruments and equipment that permit doctors and nurses to perform the miracles.

There is no one happier than a recipient of a successful renal transplant. He is freed from slavery to and dependence on the dialysis apparatus; his personality and outlook on life brighten; he can look forward to a longer and more productive life and be more at ease and less worried about his physical, mental and financial future. Fifteen or 20 years ago he would not be alive; 10 years ago he would have been lining up to use the area's few cumbersome dialysis machines; and five or six years ago the procedure of a transplant was just coming out of the experimental phase.

But, what about the failures? Sure, we all learn from the past. We learn what procedures don't work. But, with each failure there is loss of a life, an uncured or a crippled individual as a result. This creates a dilemma—a dilemma involving morals, ethics and values. It causes uneasiness and mental muddling over these issues. We all know that things must be tried for a first time. But when is it ripe for that first time?

In a survey conducted in Iowa in 1981 designed to measure public confidence in government, business, religious and social institutions, only God and President Reagan ranked ahead of the medical profession. In 1977, in a similar poll, doctors were fourth instead of third, ranking behind God, the State Highway Patrol and Banks. Being fourth in 1977 was good, but advancing to third in 1981 and being behind only two with such great appeal as God and President Reagan represents progress and portrays an image that is desirable and one we should all want to keep. There's a lot at stake and we ought to accept the challenge to live up to that sort of public confidence. It will, I believe, be increasingly difficult because the public is reacting to its health concerns with some reactions being positive but many being negative. The public has become more knowledgeable and as they do, they are becoming more critical. This makes it imperative that we not stumble blindly into the future irrespective of the issue.

Because there can be no advance in medical knowledge without human experimentation or trying things for the first time, the circumstances under which this is done must be carefully controlled.

The test must be such as to:

- Give promise of improving the health of human beings,
- Give promise of preventing or treating diseases,
- Give promise of postponing their untimely deaths,
- Be done with informed consent,
- Keep the risk as small as possible.

These are thoughts expressed by David D. Rutstein, M.D., Ridley Watts Professor of Preventive Medicine at Harvard Medical School in his article, "The Ethical Design of Human Experiments."

He said also that if these admonitions are not followed, "Progress would have to depend on surreptitious, illegal or unsupervised research and test of new modes of prevention and treatment of disease. The ethical standards of such irregular activities would certainly be at a far lower level than can be guaranteed when the testing of new methods of treatment is openly practiced."

He also stated that the ethical requirements that have created the most difficulties are obtaining informed consent, the need to derive a health benefit and keeping the risk as small as possible.

Even though such research and experimentation is indispensible to the advancement of the art and science of medicine, the rights and well being of every life is equally as important. However, the two objectives can clash.

Dr. B. N. Halpern, the noted Nobel Laureate Professor of Pharmacology, is very blunt in his statement that trials on humans are indispensible and that, "The term 'human experimentation' raises a sinister echo... but fear solves no scientific problems... that safety tests of new drugs should be carried out on fully informed volunteers in conditions of almost absolute security is more in conformity with the requirements of ethics than the thousands of such trials hypocritically carried out daily in hospitals in all countries on individuals who are totally ignorant of what is being done to them."

Henry K. Beecher, writing on the topic, "Justification for the Human Trial," said that a cardinal responsibility of all who undertake experimentation in man is that, "the project undertaken must be commensurate with the risk involved and that sound judgment must operate." He said, "Only the fanatic denies that animal experimentation must precede the human. As Sir Geoffrey Jefferson put it, "Man is too rare, too expensive, altogether too valuable an animal" to be first used . . . there are species differences. Ultimately, the definitive test must be done in man."

Up to a point, animals may be the proxy for the classical physical experiment when a new technique or device is used for the first time. But in the end, man has to be subjected to the same promising procedure before knowledge on the procedure is complete.

One can also ask, is the experiment really only for the potential benefit of the patient who is being used in the experiment or is there a broader potential benefit—the public? Does the potential for the common good of all override the risk to the individual? If it does, does its use then become a public interest that overrides the individual's rights or needs? This is more of a question when one realizes that such experiments have in the past been accomplished on prisoners or other institutionalized people, some with and some without informed consent. If this be so, then one might have to ask if society then under some circumstances owns one's individual body.

Dr. David Smith, in *Arts and Sciences*, published by the I.U. Alumni Association, said that ethics is being reviewed as a university course. The reason is the cynicism and loss of confidence by the

public about the ethics of all professionals, institutions, businesses and government. Those being accused defend themselves by saying they are victims of "Post-Watergate Morality, a new and unrealistically high standard of conduct."⁴

Without adequate safeguards and absolute attention to ethics by all who do scientific experimentation or first-time procedures on humans, there is danger of those who are involved becoming victims of the public's cynicism. Dr. Smith feels that there is need to examine all such questions, irrespective of the complexity and scarcity of answers, even though reasonable people may differ in their moral judgment. He said, "We can at least decide that some answers are worse than others."

Occurrences of the past few years—most of which have been exciting—demand that such discussions become more common in all disciplines of the health care provider's area.

Perhaps the most exciting medical event since the first heart transplant has been the implantation of the world's first artificial heart on Dec. 2, 1982 in Utah. That ranks in importance with man's first step on the moon. But, that event like other organ transplants—be they kidney, liver, or heart and lungs combinedcreates problems without definite answers. These problems are ethical, medical, social and economical. When all of these are a part of the problem, political involvement soon follows. As sure as night follows day when political involvement occurs, governmental laws, rules and regulations are just a few speeches and votes away. They are well meaning and parts of them may even be desirable or necessary; but they usually have the result of making the job of the provider or supplier more complicated by increasing red tape. Those who write the laws may overreact; those who interpret them probably do, and those who administer them almost always do.

Questions that come to mind in such a discussion as this are when can and when can't you use an investigational product? Do you bend the law? When is a product good enough to use on a human?

How do you know? How do you compare and evaluate risk versus benefit?

It is most difficult for a manufacturer to determine the risk; so the medical expert or specialist must. However, the specialist cannot even advise or take the risk without full disclosure to the patient and his or her family.

What is informed consent for the use of anything new? What is adequate prehuman testing? What is the physician's and the manufacturer's responsibility not only to the patient but also to society as concerns social and economic aspects? Are the new products or techniques used only on hopeless cases? Is there a moral aspect? Should the patient be made to make the final decision single handedly and sign on the dotted line after risks are explained? Or, should the physician urge the procedure upon an anxious patient who may be groping for any straw he can find for survival or improvement?

Certainly in the area of transplants and artificial organs the demand will soon, if not already, exceed the supply. It will exceed the ability of those with adequate knowledge and training to do the surgey. It will also exceed the capacity of hospitals to accommodate the number of patients, all of whom will need to be in critical or intensive care units for a time. And besides this, the costs will be catastrophic.

Dr. John Fletcher, in the Department of Bioethics at the National Institute of Health's Clinical Center in Bethesda, Maryland, said: "In a society where the mean age is over 30, and the majority will tend to be older for a long time to come, and when heart disease is still such an important medical problem, I think there will be unavoidable self interest by people with this problem." Dr. Fletcher continued with: "If the technology moves beyond the present very early and primitive state and if successful, if it can improve the quality of life and a person could moderate disease for years and not just hours or days—then the question will be, who is eligible and who pays?"5

When renal dialysis started, it created the same problem. At first only a few patients could be handled, so a committee was formed to make the hard choices. Then, when the technology improved, Congress stepped in and made the procedure possible for the benefit of more people. Congress picked up the bills for all who needed the life-saving procedure. There are now over 75,000 people in the United States receiving dialysis at an average cost of \$18,000 a year for each one. This took away the need for a committee to decide which persons would be selected for a chance for further life and which ones most certainly would die.

These are decisions that apply unbearable pressure and create guilt for those who have to make the decisions.

Will government eventually enter the artificial heart dilemma? There are already between 100,000 and 200,000 potential beneficiaries. With the nation's health care bill already at the \$300 billion figure, can it afford to pick up the expensive procedure?

Government doesn't look kindly on the continued rapid escalation of health care costs. Federal Budget Director Stockman says we have a system out of control. The U.S. Secretary of HHS at that time, Richard S. Schweiker, chastised the voluntary effort to contain health care costs. If the marketplace approach doesn't work, he warned, "We're certainly going to have to do other things . . . such as imposing a cap on costs."

Sylvia Porter is advocating that it's time to evaluate our health care system. She said:

"We no longer can afford to divide the health care system into those who cure, those who pay and those who are cared for: as J. Alexander McMahon, American Hospital Association president, warns, 'It is time that all participants in the private sector become actively involved in evaluating and determining which benefits of our health care system we want to keep, which we want to grow and which we feel are no longer cost-effective.'

"No other segment of our economy has gone through so sharp a rise in recent years as health care. Estimates are that the per-capita cost of medical care will almost triple to \$3,057 by 1990, when the

nation's medical bill could reach a whopping 11.5% of our output.

"Much of the increase is the price of progress: Technological innovations such as intensive care units and artificial kidney machines have made the treatment of illnesses increasingly effective but also more costly.

"A factor related to the rise in costs is Americans' lengthening life span, which has increased the number of America's elderly, who are the more prevalent victims of costly, long-term diseases. The quantity, as well as the quality, of health services has also increased, and hence costs."

Porter's article continues with: "Pushing up the cost dramatically, too, is the lack of price competition and the fact that most bills are paid by health insurers, employers or the government. This leaves few incentives or consumer demands for holding down these bills."

She said: "Yes, there have been payoffs. Most Americans are living longer than ever. Today, one of nine Americans—25 million—are over 65, or 5 million more than in 1970, and infant mortality is now the lowest in our nation's history.

"Yet, other findings point to inequities that raise the question of whether the nation is spending too much for the health care we get and how we get it . . ."

Dr. David E. Rogers, president of the Robert Wood Foundation, recently said: "Rising costs threaten the ability of communities to preserve the gains made in recent years in making quality care available to all Americans."

The New England Journal of Medicine recently stated: "We are rapidly approaching the point at which modern medicine can offer more than society can afford. New approaches are required to decide how much of our limited resources can be devoted to medical care."

The Honorable Kingman Brewster, Ambassador of the United States to the American Embassy in London, delivered an address to the Royal Society of Medicine on June 5, 1979 and was printed in the *Journal of The Royal Society of Medicine* in October 1979. It was reprinted in the *Journal of the Indiana State Medical Association* in its February 1980 issue. The article contained the most practical and common sense explanation of why cost containment is difficult. He said:

"The trouble is that the patient, when he thinks something is wrong with him, is not an economic man. He is a fearful man. He is a learful, ignorant, helpless, miserable creature. He does want health, almost at any price. He is not looking for what the economists call a 'provider.' He is looking for professional judgment. He cannot begin to compare professional capacity objectively. Next to the quality of professional judgment, the patient wants to feel that the person treating him has no thought other than how best to restore his health. He wants no second best. He certainly does not want his needs to be weighed against the claims of other patients. The patient, in short, is looking for a trustee, not a 'provider.'

"So too on the physician's side. He is not looking over his shoulder at the costs and quality offered by competing providers when he begins his diagnosis. His judgment about what to prescribe is not a function of examining competitors' 'offers' in terms of quality or price. His single motivation is, or should be, how best to discharge his trust as effectively as possible. He too wants to preserve or restore health at almost any price.

"Under the American system as it stands, relying on insurance to cover the charges of individual practitioners who set their own fees, it is not hard to see why both patient and doctor will err on the side of doing more rather than less. There is a powerful temptation for the patient to seek care he does not need and for the physician to provide it. Market

forces cannot be expected to keep pressure on costs."

Thomas Miner, an industrial relations expert, said that the "current system of medical care coverage is too costly and there's no incentive for any cost savings." Dr. Arthur Silk of Garden Grove, California, said: "American doctors, as well as the public, have for a century been educated to a single standard of medical care—the best." Bill Newsom of the Blue Cross/Blue Shield Associations in Chicago said: "The ethics of our society are such that we do whatever there is to do and the cost is secondary".

I'd predict that the same chronological order of events will occur with artificial hearts and other transplants as occurred with the need for renal dialysis. Government can hardly ignore such social and ethical problems. There comes first a new life-saving technique which leads to patient's demands. When demand exceeds supply, shortages exist. Shortages create ethical questions and hard choices of life and death. This gets media and political attention and finally governmental action is inevitable.

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Skin Biopsy Techniques: Part 2

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N COMPLETING THIS REVIEW of skin biopsy techniques, the fusiform excisional biopsy, incisional biopsy, and postoperative wound care will be discussed. The topics that were reviewed in Part 1 included the scissor, shave, and punch biopsy techniques, as well as the indications for biopsy and preparation for biopsy.

Fusiform Excisional Biopsy

This technique is more time consuming than the other skin biopsy techniques, but is the method of choice when large or deep specimens must be obtained. Examples of diseases that warrant a fusiform biopsy include panniculitides, pigmented lesions that are suspected of being malignant melanomas, and deep tumors of uncertain origin. Other indications include conditions that require examination of the overall histopathologic architecture of a lesion such as pyoderma gangrenosum or keratoacanthoma.

Preplanning of the excisional biopsy is essential to its success. Checking the skin tension lines as discussed previously, and marking the lines of incision with gentian violet or sterile pen must be done prior to injection of the anesthetic. The length of the incision should be three times the width of the lesion, in order to obtain the proper angle for closure at the ends of the wound.

The instruments necessary for excisional biopsy include a scalpel handle, #15 scalpel blade, Adson forceps, scissors for

undermining, smooth-jawed needle holder, scissors for cutting suture, suture material, small hemostat, sterile drapes and gauze sponges.

The incision is begun with the tip of the #15 scalpel blade held perpendicular at one end of the planned incision (Fig. 3A). As the incision continues around the lesion the scalpel handle is lowered so the belly of the blade cuts through the tissue. As the opposite end of the incision is approached, the handle is raised so the tip of the blade again lies perpendicular to the skin. This prevents cross hatching at the ends of the specimen. The depth of the final incision should be to the subcutaneous fat. The tissue is grasped with forceps or a skin hook and is lifted at one end. The base is transected with a scalpel or scissors, being careful to maintain the same thickness all the way through (Fig.

Hemostasis is accomplished with electrocoagulation, if necessary. If the wound can be brought together under minimal tension without inverting the skin edges, it can be sutured together without undermining (Fig. 3C). When wound tension is present, careful undermining will be necessary. This can be accomplished by blunt dissection with seissors, sharp dissection with seissors, or sharp dissection with the scalpel. The depth of the undermining is determined by the anatomical site and underlying vital structures. Danger areas for undermining include the face, posterior triangle of neck, and lateral popliteal space.

The method for closing the wound depends on its location and size as well as the physician's personal preference. Some physicians use buried sutures to reduce wound tension and thereby reduce the incidence of wound dehiscence. In addition, buried sutures reduce dead space and thereby decrease the chance of infection. Simple interrupted skin sutures may be all that is required for closure if ten-

sion along the suture line is minimal. The timing of suture removal depends on the anatomic location and the age of the patient. The physician must obtain a balance between adequate wound strength and minimizing the formation of epithelial tracks. For example, sutures on the face can be removed in 3-5 days; whereas 10-14 days are required for a wound on the lower extremity. Wound strength is minimal at the time of suture removal; therefore, the incision line is often supported with sterile paper strips for one week following suture removal.

Fusiform Incisional Biopsy

A fusiform incisional biopsy is merely a modification of the technique used for excisional biopsy. This technique is utilized for sampling lesions that are too large for complete excision including large malignant melanomas, keratoacanthomas, soft tissue tumors and some inflammatory lesions. The pathologist can accurately diagnose and determine the deepest extent of a large neoplasm, if a proper incisional biopsy specimen is obtained.

Planning the lines of incision are essential to a successful incisional biopsy. Obtaining an adequate, full-thickness sample of the tumor including normal skin at the periphery of the lesion is important (Fig. 4A). Once lines of incision have been marked and the area has been anesthetized, the biopsy can proceed.

The actual biopsy is executed as described above for the fusiform excisional biopsy (Fig. 4B). The same group of instruments can be utilized.

The closure technique may differ from that used for the excisional biopsy. A partial closure of the wound is acceptable if more extensive surgical or radiation treatment is anticipated (*Fig. 4C*). Hemostasis is accomplished with pressure or light electrodesiccation in the area that is not closed primarily with sutures.

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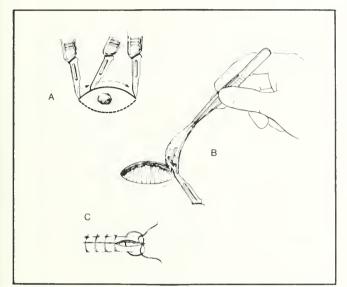


FIGURE 3: A—The excisional biopsy is started with the scalpel blade held perpendicular to the skin at one end of the planned incision. The scalpel handle is lowered so more of the cutting edge is used as the incision is made around the lesion and is raised again at the other end.

- B— The tissue is grasped with forceps and is elevated at one end. The base of the specimen is transected with a scalpel or scissors.
- C—The dermal wound is closed with buried absorbable sutures, if necessary. Simple, interrupted nonabsorbable sutures are used for skin closure.

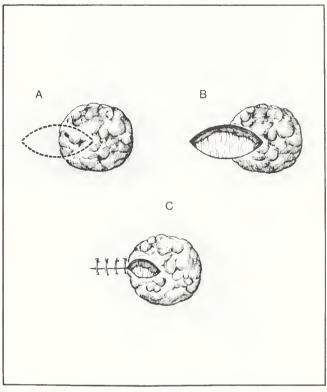


FIGURE 4: A—The wedge-shaped incisional biopsy is outlined on a large skin lesion.

- B— The fusiform biopsy specimen is incised and is removed.
- C—The wound may be closed with sutures or left open to heal by secondary intention.

Post-operative Care of the Wound

Patients should be instructed in proper wound care. Dressings should be applied to the wound, especially in the first 24-72 hours, to absorb exudate and to help reduce the incidence of wound infection and hematoma formation. The dressing will provide physical protection, stabilize the wound, and protect the wound from infection and interference by the patient.

A topical antibiotic ointment is applied directly to the wound. Its benefit after the first 24 hours is controversial. Generally, the dressing consists of a

nonadherent gauze such as Telfa applied directly on the wound followed by gauze padding and tape. The dressing should be changed at least once per day with hydrogen peroxide cleansing at the time of the dressing change. Prophylactic treatment with systemic antibiotics is generally not indicated.

Summary

The basic techniques of performing a skin biopsy have been reviewed. The shave, scissor, punch, or fusiform excisional and incisional biopsy techniques can all be performed easily in an outpatient, office setting. The principles discussed are designed to serve as guidelines, but standing alone do not necessarily prepare the physician for performing the techniques.

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Management of a Patient after Partial Chest Wall Resection and Excision of Hemidiaphragm

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Abstract

This is a report of a patient who underwent extensive chest wall resection with removal of the hemidiaphragm for a recurrent chondrosarcoma of the right chest wall. Immediate reconstruction comprised prolene mesh, greater omentum and split thickness skin grafts. The early postoperative course was complicated by respiratory insufficiency, intractable hiccups, abdominal evisceration and high output renal failure. Ventilatory support using intermittent mandatory ventilation with a continuous flow was very useful in supporting the patient until the pulmonary functions improved. Despite a large residual hernia, the patient leads a reasonably normal life with acceptable respiratory functioning two years after surgery.

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Correspondence: James E. Bennett, M.D., Dept. of Surgery, Indiana University School of Medicine, Emerson Hall 236, 545 Barnhill Drive, Indianapolis, Ind. 46223. Surgery for patients with malignant tumors of the chest wall may be palliative or curative. Because of the extent of the resection, the post-operative course of these patients may be associated with respiratory insufficiency, infection and/or nutritional deficiency. This report is of a patient with recurrent chondrosarcoma of the right lower chest involving the right hemidiaphragm and liver. After extensive resection and vigorous postoperative management, the patient recovered and continues to do well even though tumor removal was incomplete.

Case Report

A 64-year-old 78 kg man was operated upon for recurrent chondrosarcoma of the right chest. Preoperative pulmonary functions were forced vital capacity (FVC) 2.16 L, forced expiratory volume in 1 second (FEV1) 1.71 L, and peak expiratory flow rate (PF) 3.9 L/sec. Anesthesia was with rapid sequence induction using thiopental and succinylcholine for muscle relaxation to facilitate tracheal intubation, and enflurane-nitrous oxide and oxygen for maintenance.

Surgical resection included the entire thickness of the right lower anterior

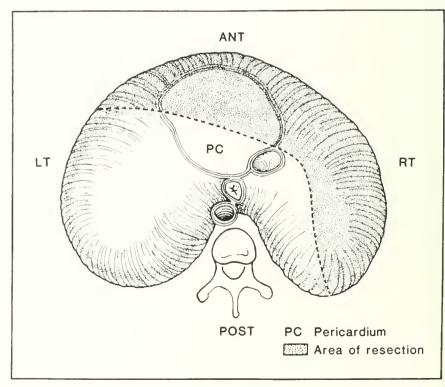


FIGURE 1: Diagram showing the extent of resection of the right hemidiaphragm.



FIGURE 2: Thoraco-abdominal defect with skin grafted viscera, two months after surgery.



FIGURE 3: One year after operation: herniated viscera are covered only with skin grafts.

chestwall, the lower one-third of the sternum, the greater portion of the right hemidiaphragm (*Fig. 1*) and adjacent tumor involving the liver.

Reconstruction was begun by anchoring prolene mesh to the stump of the right diaphragm and the cut edge of the left diaphragm and attaching it to the pericardium and anteriorly to rib periosteum and costal cartilages to cover exposed lung. The entire greater omentum isolated on the right gastroepiploic artery and vein was rotated into the defect over the prolene mesh. The abdominal wall incision was then repaired and split thickness skin grafts obtained from the thighs were applied to transplanted omentum (*Fig. 2*).

The postoperative course of this patient was complicated by respiratory insufficiency, intractable hiccups with wound dehiscence and wound evisceration on the fourth day and high output renal failure. The patient's respiratory insufficiency required supplemental oxygen and intermittent mandatory ventilation using a volume ventilator (MA1) and a continuous flow system.

Early in the postoperative course the bedside pulmonary functions measured were FVC 500-800 ml and peak inspiratory force (PIF) of -15 to 20 CM H₂0. Within 24 hours of evisceration, hiccups ceased spontaneously and two days later the high output renal failure resolved. Exposed bowel and liver were covered with a moist dressing until autogenous skin grafts could be applied. Infection was controlled with intravenous antibiotics and nutrition was maintained first with parenteral, and later with enteral, hyperalimentation. There were no complications related to the liver resection.

During a period of two months the patient gradually improved with an FVC of 1.4 L and PIF -25 CM H₂0, at which time the respiratory support was discontinued. A ventilation perfusion study at that time revealed a small right lung with a ventilation abnormality. The patient was discharged three months after surgery, ambulating without supplemental oxygen and with his exposed viscera covered with split thickness skin grafts (*Fig. 3*).

One year after surgery the patient was ambulatory without clinical recurrence of tumor. His massive hernia was contained with a specially designed abdominal thoracic support. An evaluation of pulmonary status at this time showed an FVC 1.8 L (46% predicted), FEV1 1.44 L, and arterial blood gases and pH (room air) Pa02 73 mmHg, PaCO2 39 mmHg and pH 7.42; he had reduced total lung capacity, normal airway resistance, and one lung compartment (right) emptying slowly as measured by nitrogen washout studies and flow volume loops.

Discussion

Problems associated with surgery for chest wall tumors relate to the extensiveness of the resection and attendant reconstruction. Postoperative complications require meticulous care.

While the surgical repair of massive chest wall defects and defects of the diaphragm have both received attention in the literature, removal of a significant portion of the chest wall and half of the diaphragm presents a rather unusual and

complex problem in reconstruction and postoperative care. While use of a synthetic mesh as an adjunct to reconstruction is probably optional in the repair of isolated chest wall defects, it is useful when both chest wall and diaphragm have been partially resected.4 Muscle and musculocutaneous flaps are often used for soft tissue replacement5 when a portion of the chest wall is removed but the three dimensional defect in our patient designated the greater omentum as the soft tissue reconstruction of choice. 6,7,8 Omentum provides an excellent receptor for skin grafts which can be applied after the omentum is secured.

While respiratory problems were anticipated, our patient's intractable hiccups were not. Undoubtedly these contributed to his massive evisceration. When the patient had stabilized following his evisceration, split thickness skin grafts were applied to exposed liver and bowel. The resultant massive hernia is adequately managed by the patient with a supportive binder.

Our patient's high output renal failure resolved spontaneously and, as noted earlier, infection was controlled by the use of intravenous antibiotics and nutritional support was maintained by hyperalimentation: initially parenteral and later

Respiratory failure requiring support occurs in 22% of patients undergoing chest wall resection.1 Chest wall repair following resection involving the diaphragm should include closure of the diaphragmatic defect and separation of the abdominal and pleural cavities. To achieve good stability of the chest and decrease the paradoxical movement during inspiration, the medial portion of the prosthetic mesh should be fixed to the pericardium.9 Patients who have extensive resection require respiratory support tor a variable period of time. The common pulmonary function abnormalities are decreases in FVC, maximum breathing capacity (MBC) and FEV1.

The preoperative pulmonary functions in our patient indicated a moderative restrictive defect (FVC 2.16 L). This defect deteriorated to an extreme form (FVC 500-700 ml), indicating marked compromise requiring ventilatory support. Intermittent mandatory ventilation proved to be very useful for the support in this patient. When the FVC improved to 1.2 L, the patient could be weaned from the respiratory support. Despite a moderately severe restrictive defect and asymmetric lung volumes in the

pulmonary functions, the patient continues to be asymptomatic with satisfactory arterial blood gases.

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Gastric Polyps of Epithelial Origin: Implications for Treatment

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PPROPRIATE TREATMENT of epithelial polyps depends primarily on the histology of the polyp. As polyps of the stomach occur infrequently, confusion arises concerning proper management. Overall their incidence is quite low, ranging from .4% to .7% in autopsy series. Histologically, these can be divided into cpithelial or mesenchymal types. Epithelial polyps comprise roughly 75% of all benign tumors of the stomach; however, benign lesions make up only 2% of all gastric tumors. Discussion will be limited to those polyps of epithelial origin.

The term "polyp" is derived from the Greek word "polypus" which means "many footed." Historically, Morgagni is generally credited with first recognizing a gastric polyp postmortem in 1739, although an earlier report occurred in 1557 by Lusitanus. The first clinical diagnosis of a gastric polyp was made in 1857 by Quain. In 1911 Heinz, using the fluoroscope, diagnosed a gastric polyp radiographically. Finally, gastroscopic diagnosis was obtained by Schendler in 1922.

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FIGURE 1: Endoscopic view of antral gastric polyp.

Clinical Aspects

50% of all patients with gastric polyps are completely asymptomatic. Most cases occur in patients over 50 years of age, with an average age of 66 years. Sex differentiation is about equal.³ The symptoms are primarily dyspepsia and vague epigastric disorders.

Occasionally, melena or an acute upper G.I. tract blood loss may be present secondary to ulceration of a polyp. Rarely, pyloric or duodenal obstruction may

occur secondary to the mass. The diagnosis of a polyp is usually made by upper G.I. series and further substantiated by endoscopy. The differential diagnosis includes postoperative changes, gastric varices, and Menetrier's disease. Most importantly, one should be aware that gastric carcinoma may present as a polypoid lesion which is estimated to occur in up to 5% of all cases of gastric cancer. Also a coexistent primary gastric cancer has been found to occur with gastric polyps in up to 60% of cases.

Pathology

Much confusion has arisen regarding the natural history and premalignant potential of gastric polyps. This is due to the frequent grouping of different histologic types of polyps. Recent articles by Ming and Tomasulo have provided proper histologic classification on which to base appropriate clinical treatment.^{6,7} From these studies gastric epithelial polyps can be divided into hyperplastic or adenomatous types.

Hyperplastic or regenerative polyps are most common, representing 76% to 79% of all polyps in these series. Usually these are small polyps; 90% are less than 2 centimeters. Their contours are smooth or

TABLE 1 Differentiation of Hyperplastic Vs. Adenomatous Polyps^{6,7}

CHARACTERISTIC	HYPERPLASTIC	ADENOMATOUS
Size >2 cm	900	80°°
Configuration	Smooth	Papillary
Multiplicity	31%	0
Coexisting Gastric Cancer	28%	59 %
Malignant Transformation	0	22 % 5 - 40 % .
Achlorhydria	79°°	940.

slightly lobulated. Microscopically, they are composed of normal appearing pyloric glands or cyst-like glands lined by normal cells. Hyperplasia of the surface may be noted. Malignant transformation was not noted in any of Ming's or Tomasulo's series. The etiology of these lesions remains unknown but is probably linked to previous mucosal injury and subsequent mucosal proliferation. These polyps are frequently multiple and approximately 50% arise in the antrum.*

Adenomatous polyps comprise 21% to 24% of all gastric polyps. These are usually papillary; over 80% of Ming's group were 2 centimeters or larger in size. The adenomatous polyps are composed of hyperplastic elongated cells with nuclear atypica and are termed as having a "picket fence" pattern.² These usually have abrupt, easily defined borders within the surrounding normal tissue. Carcinoma *in situ* occurred in these polyps in 22% of Tomasulo's study and 40% of Ming's study. This polyp usually occurs singly and most are found in the antrum.

Additionally, hamartomatous polyps may arise in the stomach. The most widely recognized example of this type of polyp occurs in the Peutz-Jeghers syndrome. Usually these are found in the small intestine and colon, but in approximately 24% of cases, gastric polyps were also identified. Hamartomatous polyps are composed not only of epithelial elements but also of smooth muscle. Histologically, these resemble hyperplastic polyps. The premalignant nature is as yet unknown, although several reports of cancer arising in patients with Peutz-Jeghers syndrome have been reported.9,10

Gastric polyps may also occur in the familial polyposis syndrome, including Gardner's syndrome. From the few reports available, it appears that the type of polyp that occurs with this syndrome is that of a hyperplastic nature. Although there is a high incidence of carcinoma arising in the colon in these syndromes, the malignant potential for gastric carcinoma is unknown.

Four other miscellaneous types of gastric polyps may occur with some fre-



FIGURE 2: Photomicrograph of hyperplastic polyp. Note that the epithelium is relatively normal.



FIGURE 3: Histologic view of adenomatous polyp.

quency. Aberrant pancreatic tissue most commonly occurs in the submucosa, although occasionally there may be a nipple-like projection at the mucosal level. These can range in size from .5 centimeters to 3 centimeters. Brunner's

gland adenomas may also arise in the stomach; however, they most frequently occur in the first portion of the duodenum. Microscopically, they are composed of normal appearing Brunner's glands which can be interlaced with bands of smooth muscle fiber.' Thirdly, a special type of polyp known as an inflammatory pseudotumor, eosinophilic granuloma or gastritis may occur. As the name implies, the lesion is heavily infiltrated with eosinophils. Approximately 20% are polypoid. If surgical treatment is undertaken, local resection is all this condition requires.2 Lastly, an additional note is made of the so-called pseudopolyp which in essence is a remnant of normal mucosa surrounded by areas of atrophic gastritis. This can be readily differentiated by careful endoscopic evaluation and biopsy.

Treatment

Indications for treatment include any case in which the polyp is symptomatic, as in an obstructing or bleeding lesion or when the patient's symptoms are thought to be related to the polyp. The strategy for treatment depends on biopsy which can in most cases be easily obtained by endoscopy. If a polyp is hyperplastic, and a coexistent gastric cancer has been ruled out, no further treatment need be undertaken except for follow-up. Adenomatous polyps with carcinoma obviously require gastric resection. Partially resected or biopsied polyps which are adenomatous and greater than 2 centimeters should undergo local resection. In situations where the adenomatous polyp is less than 2 centimeters, judgment as to resection and observation must be weighed. The risk of possible carcinoma arising in these smaller adenomatous polyps is probably less than 5%. 2,6,7

Difficulty in decision-making arises when multiple polyps are encountered. This requires careful and detailed endoscopic evaluation for each polyp and assurance that a gastric cancer is not present. As all of the polyposes syndromes have primarily hyperplastic polyps, the treatment would involve exclusion of cancer and close surveillance. The cancer question in these patients has not been answered. Resectional therapy for multiple adenomatous polyps is warranted due to the problem of malignant transformation, similar to current thinking concerning colon polyps.

Endoscopic polypectomy may be a warranted procedure; however, because of the vascularity of the stomach, preparations for possible laparotomy should be made preoperatively. From two studies utilizing endoscopic polypectomy there appeared to be a relatively low complication rate ranging from 2% to 4%. These complications include continued bleeding from the biopsy site and perforation of the stomach. In other situations where endoscopic polypectomy is not available or seems unwise from the size of the polyps, standard operative procedures are warranted utilizing either segmental resection of the stomach or wedge excision of the polyp. From a recent review regarding the surgical management of gastric polyps, the inhospital complication rate was 6%.13

Summary

When a gastric polyp is encountered, it is important to determine the histological type of polyp present. A hyperplastic polyp can be treated either by biopsy and observation or simple

polypectomy. However, an adenomatous polyp larger than 2 centimeters requires total polypectomy either endoscopically or by surgical techniques. In evaluating patients with adenomatous polys less than 2 centimeters, care must be taken to exclude carcinoma *in situ*. With all gastric polyps, consideration must be given to the possibility of a coexistent carcinoma arising elsewhere in the stomach.

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Treatment of Hypertriglyceridemia

A National Institutes of Health Consensus Report Abstract

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Due to the recent major advances and the increased understanding of hypertriglyceridemias, the National Institutes of Health have published the recommendations of a Consensus Development Conference convened in September 1983.

The panel discussed what constitutes hypertriglyceridemia, what evidence links elevated plasma triglycerides with disease, and which patients with hypertriglyceridemia are candidates for therapy.

The panel reviewed the etiologies of hypertriglyceridemia, indicating that these may be primary or secondary. The primary causes are genetic in nature and are classified by the various genotypes. The secondary causes are many, including obesity, too much alcohol, and sedentary existence. Secondary elevations are also commonly seen when certain systemic diseases are present, such as diabetes, hypothyroidism, renal and liver disease, and often seen in some of the therapeutic drugs that are commonly used.

The conferees proposed a simplified clinical approach to fasting triglyceride levels requiring therapy based on associated risk to the patient:

1. Fasting triglyceride levels of up to

250 mg% with no elevation of the serum cholesterol represent no increased risk to the patient and, as a general rule, do not require any therapy.

- 2. Fasting triglyceride levels of 250-500 mg%, representing 10% of the general population, represent a borderline area. This group represents a twofold increase in cardiovascular risk, which is associated with the fact that a small number of genetic hyperlipidemias will be seen in this group which account for this increased risk (familial combined hyperlipidemia and Type III). The majority of this group will be found to be normal, or those elevations associated with poor lifestyle or obesity. Some number of this group will be those found in association with other systemic diseases or sometimes secondary to some of the common therapeutic drugs that are used, such as thiazide diuretics, oral contraceptives, estrogens or beta-blocking drugs. Specific therapy in this group is directed at the genetic disorders, while the rest of the group is treated by controlling any systemic disorders, improving eating and drinking habits, and obesity.
- 3. Fasting triglyceride levels of 500 mg% and above, involving about 1% of the population, are abnormal. The higher the level in this group, the greater the risk for acute pancreatitis, and the greater the need for aggressive fat restriction and often drugs. The cardiovascular risk in this group is somewhat controversial and would relate to the familial combined hyperlipidemia and the Type III that may also be seen in this group. This group

represents a true hyperlipidemia and should be investigated thoroughly for both primary and secondary causes.

Therapy is discussed in detail, emphasizing the fact that fat restriction, oftentimes severe, is the cornerstone of all therapy to these hyperlipidemias. Most all levels of increased triglycerides will respond to careful fat restriction. The fat restriction should obviously be associated with control of any systemic disease that is contributing to the hyperlipidemia.

The discussion of drug therapy was limited to clofibrate, gemfibrozil, and nicotinic acid. It was pointed out that there is significant risk in the use of clofibrate and gemfibrozil. Drugs should not be used until saturated fat restriction has been used over an extended period of time and failed. Drugs are used early in patients who have extremely high levels of triglycerides and are at great risk for acute pancreatitis. It was felt that the drugs in addition to diet should be directed primarily at the two genetic disorders which have increased cardiovascular risk (familial combined hyperlipidemias and Type III). Drugs should not be used for a prolonged period of time if no reasonable success is noted.

The panel felt that three major areas of research need to be pursued:

- 1. The reasons for the relatively high plasma triglyceride concentration noted in the population of the United States.
- 2. The need to evaluate the impact of commonly used drugs.
- 3. Further studies to further delineate the cardiovascular risk.



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CME QUIZ.

TO OBTAIN ONE HOUR OF CATEGORY I AMA CME CREDIT, answer the following questions by circling the correct answer on the answer sheet below. Complete and clip the application form and mail it to: Indiana University School of Medicine, CME Division, Fesler Hall 224, 1120 South Dr., Indianapolis 46223.

Hyperlipidemias . . .

CONTINUED FROM PAGES 441-445

- I. Which lipoproteins contain most of the plasma cholesterol and are atherogenic?
 - a. Chylomicrons
 - b. High density lipoproteins
 - c. Low density lipoproteins
 - d. Very low density lipoproteins
- 2. Which lipoproteins transport dietary fat?
 - a. Chylomicrons
 - b. High density lipoproteins
 - c. Low density lipoproteins
 - d. Very low density lipoproteins
- 3. Which lipoproteins are inversely correlated with atherosclerosis (antiatherogenic)?
 - a. Chylomicrons
 - b. High density lipoproteins
 - c. Low density lipoproteins
 - d. Very low density lipoproteins

- 4. Which lipoproteins are increased by high carbohydrate diets?
 - a. Chylomicrons
 - b. High density lipoproteins
 - c. Low density lipoproteins
 - d. Very low density lipoproteins
- 5. Which one of the following is currently used as a lipid screening test because of reasonable cost and ease of the laboratory technique?
 - a. Apoprotein B
 - b. HDL cholesterol
 - c. LDL cholesterol
 - d. VLDL cholesterol
- 6. In addition to the hyperlipidemias, each of the following is a risk factor for atherosclerosis *except*:
 - a. anemia.

2. d

3. b

4. c

- b. cigarette smoking.
- c. diabetes mellitus.
- d. hypertension.

- 7. Secondary hyperlipidemia should be excluded before diagnosing a primary lipid disorder. Which one of the following is *least* likely to cause a secondary hyperlipidemia?
 - a. Alcoholism
 - b. Diabetes mellitus
 - c. Hypothyroidism
 - d. Myocardial infarction
- The dietary treatment of a patient with familial hypercholesterolemia should restrict or limit all of the following except:
 - a. Calories to achieve or maintain ideal weight.
 - b. complex carbohydrates and fiber.
 - c. foods rich in cholesterol.
 - d. saturated fats.
- 9. Which one of the following drugs is *least* helpful in the treatment of hypercholesterolemia?
 - a. Colestipol
 - b. Gemfibrozil
 - c. Nicotinic acid
 - d. Probucol
- 10. Which one of the following drugs is *least* helpful in the treatment of hypertriglyceridemia?
 - a. Cholestyramine
 - b. Clofibrate
 - c. Gemfibrozil
 - d. Nicotinic acid

MAY CME QUIZ Answers

Following are the answers to the CME quiz that appeared in the May 1984 issue: "Total Parenteral Nutrition: Indications and Techniques," by Robert J. Robison, M.D., and James A. Madura, M.D.

Answer sheet for Quiz: (Hyperlipidemias . . .)

1. a b c d 6. a b c d
2. a b c d 7. a b c d
3. a b c d 8. a b c d
4. a b c d 9. a b c d
5. a b c d 10. a b c d

I wish to apply for one hour of category 1 AMA Continuing Medical Education credit through the I.U. School of Medicine. I have read the article and answered the quiz on the answer sheet above. I understand that my answer sheet will be graded confidentially, at no cost to me, and that notification of my successful completion of the quiz (80% of the questions answered correctly) will be directed to me for my application for the Physician's Recognition Award of the American Medical Association. I also understand that if I do not answer 80% of the questions correctly, I will not be advised of my score but the answers will be published in the next issue of Indiana Medicine for my information.

Name (please print or type)

Address

5 d

6. e

7. b

Identification number (found above your name on mailing label)

Signature

To be eligible for this month's quiz, send your completed, signed application before July 10, 1984 to the address appearing at the top of this page.

Announcing a major advance in cardiovascular therapy

CARDIZEM™ (diltiazem HCl)
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CALCIUM CHANNEL BLOCKADE

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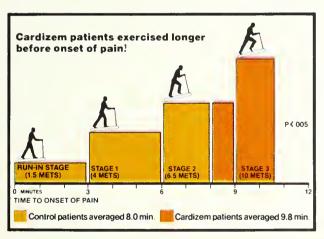
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INCREASES EXERCISE TOLERANCE, REDUCES ANGINAL FREQUENCY* WITH A LOW INCIDENCE OF SIDE EFFECTS

Calcium channel blockade with CARDIZEM™ (diltiazem HCl) produces changes in cardiovascular hemodynamics and coronary blood flow that are of benefit in myocardial ischemia.

CARDIZEM™ (diltiazem HCl) ALLOWS PATIENTS TO SIGNIFICANTLY PROLONG EXERCISE TOLERANCE, EVEN IN DEMANDING BRUCE PROTOCOL EXERCISE TESTS¹ (n = 15)†



This study is of special significance because patients not only exercised longer but *to the next higher stage* in the Bruce protocol.

A Bruce protocol with a run-in stage was used for all tests. Each stage lasts three minutes.

In other studies, Cardizem produced 41% to 68% reduction of Prinzmetal's variant angina attacks?

†This study is a report from one center in a multicenter study.

Therapy with Cardizem produced a low incidence of side effects.

In placebo-controlled trials (222 patients) conducted in the United States, the incidence of adverse reactions reported during Cardizem therapy was not greater than that reported during placebo therapy.

References:

 Pool PE, Seagren SC, Bonanno JA, et al: The treatment of exercise-inducible chronic stable angina with diltiazem: Effect on treadmill exercise. Chest 78 (July suppl): 23 4:238, 1980.

on treadmill exercise. *Chest* 78 (July suppl): 234-238, 1980.

2. Schroeder JS, Feldman RL, Giles TD, et al: Multiclinic controlled trial of diltiazem for Prinzmetal's angina. *Am J Med* 72:227-232, 1982.

Those adverse reactions reported most frequently with Cardizem in 959 patients in controlled and uncontrolled U.S. trials have been:

	Nausea2.7	
•	Swelling/edema2.4	%
	Arrhythmia2.0	
•	Headache	%
•	Rash	%
	Fotime 1.1	

Other reactions reported infrequently (less than 1%) are listed in full prescribing information on adjacent page.

'Please see adjacent page for full prescribing information.

PROFESSIONAL USE INFORMATION



OESCRIPTION

CARDIZEM™ (diltiazem hydrochloride) is a calcium ion influx inhibitor (slow channel blocker or calcium antagonist). Chemically minion (stow distance blocker of carcium analysins); chemically distazem hydrochloride is 1,5-Benzothrazepin-4(5H)one,3-(acetyl oxyl 5-[2-(dimethylamino]ethyl]-2,3-dihydio-2-(4 methoxyphenyl)-monohydrochloride,(+)-cis- The chemical structure is

Diltiazem hydrochloride is a white to off-white crystalline powder with a bitter taste. It is soluble in water, methanol, and chloroform. It has a molecular weight of 450.98. Each tablet of CARDIZEM contains either 3D mg or 6D mg diltiazem foi oral administration

CLINICAL PHARMACOLOGY

The therapeutic benefits achieved with CARDIZEM are believed to be related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle

Mechanisms of Action. Although precise mechanisms of its antianginal actions are still being delineated, CARDIZEM is believed

tranglinal actions are still being defined tot, CATURELINES DELIVENCE

1. Angina Due to Coronary Artery Spasm CARDIZEM has been shown to be a potent dilator of coronary arteries both epicardial and subendocardial Spontaneous and ergonovine.

induced coronary artely spasm are inhibited by CARDIZEM

Exertional Angina CARDIZEM has been shown to produce increases in exercise tolerance, probably due to its ability to reduce myocardial oxygen demand. This is accomplished via reductions in healt rate and systemic blood piessule at sub-

maximal and maximal exercise work loads In animal models, diltiazem interferes with the slow inward (depolarizing) current in excitable tissue. It causes excitationcontraction uncoupling in various myocardial tissues without changes in the configuration of the action potential. Diltiazem produces relaxation of coronary vascular smooth muscle and dilation of both large and small coronary arteries at drug levels which cause little or no negative inotropic effect. The resultant increases in coronary blood flow (epicardial and subendocardial) occui in ischemic and nonischemic models and are accompanied by dose-dependent decreases in systemic blood pressure and decreases in peripheral

Hemodynamic and Electrophysiologic Effects. Like other calcium antagonists, diltiazem decreases sinoatiial and atrioventriculai conduction in isolated tissues and has a negative inotiopic effect in isolated preparations. In the intact animal, prolongation of

the AH interval can be seen at higher doses

In man, diltiazem pievents spontaneous and ergonovine-provoked colonary artery spasm. It causes a decrease in peripheral vascular resistance and a modest fall in blood pressure and, in exercise tolerance studies in patients with ischemic heart disease, reduces the heart rate/blood pressure product for any given work load. Studies to date, primarily in patients with good ventricular function, have not revealed evidence of a negative inotropic effect, cardiac output, ejection fraction, and left ventricular end diastolic pressure have not been affected. There are as yet few data on the interaction of diltrazem and beta-blockers. Resting heart rate is usually unchanged

or slightly reduced by diltiazem Intravenous diltiazem in doses of 2D mg prolongs AH conduction time and AV node functional and effective refractory periods approximately 20%. In a study involving single oral doses of 300 mg of CARDIZEM in sx normal volunteers, the average maximum PR profongation was 14% with no instances of greater than first-degree AV block Diltiazem-associated prolongation of the AH interval is not more pronounced in patients with first-degree heart block. In patients with sick sinus syndiome, diltiazem significantly prolongs sinus cycle length (up to 50% in some cases).

Chionic oral administration of CARDIZEM in doses of up to 24D mg/day has resulted in small increases in PR interval, but has not usually produced abnormal prolongation. There were, however, three instances of second-degree AV block and one instance of third-degree AV block in a group of 959 chronically treated patients.

Pharmacokinetics and Metabolism. Dilitazem is absorbed from the tablet formulation to about 80% of a reference capsule and is subject to an extensive first-pass effect, giving an absolute bioavailability (compared to intravenous dosing) of about 40%. CARDIZEM undergoes extensive hepatic metabolism in which 2% of 4% of the unchanged drug appears in the urise lighting the product. to 4% of the unchanged drug appears in the urine in vitro binding studies show CARDIZEM is 70% to 80% bound to plasma proteins. Competitive ligand binding studies have also shown CARDIZEM binding is not altered by therapeutic concentrations of digoxin, hydrochlorothiazide, phenylbutazone, propranolol, salicylic acid, or warfarin. Single oral doses of 3D to 12D mg of CARDIZEM result in detectable plasma levels within 3D to 6D minutes and peak plasma levels two to three hours after drug administration. The plasma plasma levels two to thiee hours after drug administration. The plasma elimination half-life following single or multiple drug administration is approximately 3.5 hours. Desacetyl diffuazem is also present in the plasma at levels of 10% to 20% of the parent drug and is 25% to 50% as potent a: a coronary vasodilator as diffuazem. Therapeutic blood levels of CARDIZEM appear to be in the range of 50 to 200 ng/ml. There is a departure from dose-linearity when single doses above 60 mg are given; a 120-mg dose gave blood levels three times that of the 60-mg dose. There is no information about the effect of renal or hepatic impairment on excretion or metabolism of dilitazem. of diltiazem

INDICATIONS AND USAGE

Angina Pectoris Due to Coronary Artery Spasm.
CARDIZEM is indicated in the treatment of angina pectoris
due to coronary artery spasm. CARDIZEM has been shown

effective in the treatment of spontaneous coronary artery spasm presenting as Prinzmetal's variant angina (resting angina with ST-segment elevation occurring during attacks

Chronic Stable Angina (Classic Effort-Associated Angina). CARDIZEM is indicated in the management of chionic stable angina in patients who cannot tolerate therapy with beta-blockers and/or nitiates or who remain symptomatic despite adequate doses of these agents. CARDIZEM has been effective in short-term controlled trials in reducing angina frequency and increasing exercise tolerance, but confirmation of sustained effectiveness is incomplete.

There are no controlled studies of the effectiveness of the con-

comitant use of diltiazem and beta-blockers or of the safety of this combination in patients with impaired ventricular function or conduction abnormalities

CONTRAINOICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block, and (3) patients with hypotension (less than 9D mm Hg systolic).

WARNINGS

1 Cardiac Conduction. CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndiome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (four of 959 patients for D.42%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.

Congestive Heart Failure. Although diltiazem has a nega-tive inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in caldiac index nor consistent negative effects on contractifity (dp/dt). Experience with the use of CARDIZEM alone or in combination with beta-blockers in patients with impaired ventricular function is very limited Caution should be exercised when using the drug in such

3 Hypotension. Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic 4 Acute Hepatic Injury. There has been a single report in a patient receiving 120 mg of dilitazem tid of marked transaminase elevation (SGDT 4500, SGPT 2300) accompanied by hyperbilirubinemia (to 3 mg%), occurring after four days of treatment. The enzyme abnormalities resolved entirely, and enzymes were nearly normal a week after cessation of treatment. No rechallenge was carried out, but the patient had no evidence of viral hepatitis and received no other drugs but isosoibide dinitrate.

No other similar liver injury has been reported in clinical tilals, but marketing experience in Europe has resulted in a rechallenge-confirmed instance of hepatocellular injury. How ever, it should be noted that there have been further episodes of raised transaminases in the absence of diltiazem in this patient, so that the relationship to diltuazem of the abnormalities is not completely clear Other instances of transaminase elevation have been reported in Europe, but their relationship to the diug is uncertain.

PRECAUTIONS

General. CARDIZEM is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any new drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and lat studies designed to produce toxicity, high doses of dilitazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued in dogs, doses of 20 mg/kg were also associated with hepatic changes, however, these changes were

Orug Interaction. Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM (See

Uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated. Available data are not sufficient, however, to predict the effects of concomitant treatment, particularly in patients with left ventricular dysfunction or cardiac conduction abnormalities, the effect of dilitiazem on seium digoxin levels has not been examined. The safety of the combination of CARDIZEM and beta-blockers or digitalis is cur-rently being investigated in well-controlled studies.

Carcinogenesis, Mutagenesis, Impairment of Fertility. 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in in vitro bacterial tests. No intrinsic effect on fertility was observed

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and labbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rati There was an increased incidence of stillbirths at doses of 2D times the human dose or greater

There are no well-controlled studies in pregnant women, therefore, use CARDIZEM in pregnant women only if the potential benefit

justifies the potential risk to the fetus.

Nursing Mothers. It is not known whether this drug is excreted. in human milk. Because many drugs are excreted in human milk, exercise caution when CARDIZEM is administered to a nuising woman if the drug's benefits are thought to outweigh its potential risks in this situation

Pediatric Use. Safety and effectiveness in children have not

ADVERSE REACTIONS

rious adverse reactions have been raie in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded Experience with an added beta-blocker is also extremely limited

In domestic placebo-controlled trials, the incidence of adverse reactions reported during CARDIZEM therapy was not greater than

that reported during placebo therapy

In addition, the following have been reported infrequently and represent occurrences which can be at least reasonably associated with the pharmacology of calcium influx inhibition. In many cases, the relationship to CARDIZEM has not been established. The most common occurrences, as well as their frequency of presentation, are nausea (2.7%), swelling/edema (2.4%), arrhythmia (2.0%), headache (2.0%), iash (1.8%), and fatigue (1.1%). In addition, the following events were reported infrequently (-1.0%). The order of presentation corresponds to the relative frequency of occurrence Cardiovascular Fiushing, congestive heart failure, bradycardia hypotension, syncope, pounding heart.

Central Nervous Drowsiness, dizziness, lightheadedness, nervous-System ness, depression, weakness, insomnia, confusion,

hallucinations.
Gastrointestinal Vomiting, diarrhea, gastric upset, constipation,

indigestion, pyrosis.
Pruritus, petechiae, urticaria

Dermatologic Photosensitivity, nocturia, thirst, paresthesias, Other polyuria, osteoarticular pain. The following additional experiences have been noted

A patient with Prinzmetal's angina experiencing episodes of vasospastic angina developed periods of transient asymptomatic asystole approximately five hours after receiving a single 6D-mg dose of CARDIZEM.

Experience in 959 patients taking oral doses of CARDIZEM resulted in three cases (D.31%) of second-degree AV block and one case (D.10%) of third-degree AV block at doses of 240 to 360 mg darly

In rare instances, mild to moderate transient elevations of alkaline phosphatase, SGOT, SGPT, LDH, and CPK have been noted during CARDIZEM therapy. A single incident of markedly elevated liver enzymes associated with symptoms was reported in a patient taking 36D mg per day for four days. Drug was discontinued and enzymes normalized within 1 week

OVERDOSAGE OR EXAGGERATEO RESPONSE

Overdosage experiences with oral diffragem have not been reported. Single oral doses of 3DD mg of CARDIZEM have been well tolerated by healthy volunteers. In the event of overdosage or exaggerated response, appropriate supportive measures should be employed in addition to gastric lavage. The following measures may be sidered

Bradycardia Administer atropine (0.60 to 1.0 mg). If there is no response to vagal blockade, administer isopio-

terenol cautiously Treat as for bradycardia above Fixed high-degree AV block should be treated with cardiac pacing. High-degree AV Cardiac Failure Administer inotropic agents (isoproterenol, dopa-

mine, or dobutamine) and diuretics.

Vasopiessors (eg., dopamine or levarterenol Hypotension

bitartrate)
Actual treatment and dosage should depend on the severity of the clinical situation and the judgment and experience of the treating

physician
The oral L0so's in mice and rats range from 415 to 740 mg/kg
and from 560 to 810 mg/kg, respectively. The intravenous L0so's
in these species were 60 and 38 mg/kg, respectively. The oral
L0so in dogs is considered to be in excess of 50 mg/kg, while
lethality was seen in monkeys at 360 mg/kg. The toxic dose in man
and known, but blood levels in excess of 500 mg/kg. June and is not known, but blood levels in excess of 800 ng/ml have not been associated with toxicity

DOSAGE AND AOMINISTRATION

physician

Exertional Angina Pectoris Due to Atherosclerotic Coronary Artery Oisease or Angina Pectoris at Rest Due to Coronary Artery Spasm. Dosage must be adjusted to each patient's needs. Starting with 3D mg four times daily, before meals and at bedtime, dosage should be increased gradually to 24D mg (given in divided doses three or four times daily) at one- to two-day intervals until optimum response is obtained. The effectiveness and safety of dosages exceeding 24D mg per day are currently being investigated. There are no available data concerning dosage requirements in patients with impaired renal or hepatic function. If the drug must be used in such patients, titiation should be carried out with particular caution

articulai caution

Concomitant Use With Other Antianginal Agents.

1 Subingual NTG may be taken as required to abort acute anginal attacks during CARDIZEM therapy.

2. Prophylactic Nitrate Therapy — CARDIZEM may be safely coadministered with short- and long-acting nitrates, but there have been no controlled studies to evaluate the antianginal effectiveness of this combination.

3. Path. Phys. (Sep. WARDINGS and PRECAUTIONS)

3 Beta-blockers. (See WARNINGS and PRECAUTIONS.)

HOW SUPPLIED

CARDIZEM 30-mg tablets are supplied in bottles of 1DD (NDC D088-1771-47). Each green tablet is engraved with MARION on one side and 1771 engraved on the other CARDIZEM 60-mg scored tablets are supplied in bottles of 1DD (NDC D088-1772-47). Each yellow tablet is engraved with MARION on one side and 1772 on the other

Issued 11/82

Another patient benefit product from



PAUL HARVEY: The Family Physician

World famous commentator Paul Harvey championed the family practice specialty in his radio, television and newspaper commentaries in the days following his keynote address at the 1983 meeting of the American Academy of Family Physicians in Miami Beach, Fla. last fall. The following commentary formed the basis of one of Mr. Harvey's October broadcasts.

IPPOCRATES was a "family doctor." The practice is older than that.

Until the time of our fathers, babies were delivered and children were treated and adults were healed and the aged were comforted by—a family doctor.

Only in the short generation since has the science of medicine, excited by new drugs, new techniques, new technologies been running in half a hundred separate directions seeking to extend our years. With impressive successes.

And for ambitious medical students during that while, it was more exciting and more prestigious and more rewarding to be identified with one of the medical specialties. Scientists sought and got fame and following if they became known as "the best" in removing a cataract or excising a cancer, transplanting a heart or repairing an athlete's torn shoulder.

Reprinted with permission from the November 1983 issue of AAFP Reporter, Kansas City, Mo., and Paul Harvey News, Chicago.



Paul Harvey

And make no mistake, the specialists contributed mightily toward extending our span of pain-free years. You and I can expect to enjoy half a lifetime more than did our own parents.

But the profession of medicine, fragmented, grew impersonal. And suddenly patients were suffering and dying less from breaks and bugs than from wear and tear. Less from malaria and TB and whooping cough and polio, but more from anxieties and excesses, and new kinds of mental stress were creating new kinds of physical distress-and the tunnel-vision doctor had not been paying much attention to the likes of that. The family doctor still did.

Selflessly, sometimes sacrificially, the family physician continued to learn a lot about a lot of things—enough to solve, or at least to identify, problems in an assortment of disciplines-gynecology and pediatrics, gerontology and surgery and psychiatry, and nutrition. Preventive medicine as well as curative medicine.

But mostly the family physician provided kindly caring, healing hope.

At long last-after a generation of comparative anonymity—a dozen years ago the family doctor moved up from the back of the bus.

The American Board of Medical Specialties and the Council on Medical Education of the American Medical Association officially recognized "family practice" as, in itself, a specific medical discipline. And the American Academy of Family Physicians became their properly esteemed umbrella.

Now the family doctor is not only examined and certificated, but his is the only medical specialty requiring reexamination and re-certification every six years.

The family doctor, despite the scope of his preparation, costs you less. Partly because office visits cost less than hospital visits.

We who grew up with near reverence for the "family doctor" have watched his enhanced professional recognition with a kind of shared pride. We recognized him first.

EDITORIALS

The Advent of NMR

Diagnostic related techniques are playing an ever-increasing role in today's medical care. Recently, much attention has been given to nuclear magnetic resonance (NMR), a new modality in diagnostic imaging that is expected to surpass x-ray and computed axial tomography (CAT) scanning techniques.

Why is this so? One major reason may be because people are naturally opposed to harmful radiation and the introduction of foreign and potentially life-threatening materials (contrast media sometimes used in CAT scans) into their bodies. The NMR technique is believed to be completely safe. It employs a magnetic field and radio frequency to construct an image of any part of the human body. In addition, NMR is able to analyze the chemistry of human tissue, including bone, for abnormalities. Radiologists and biochemists agree that NMR is here to stay and many recognize the need to purchase their own scanner, or at least have access to one.

At present, there are only a handful of whole-body NMR scanners in operation across the country. The Food and Drug Administration is in the process of reviewing applications and granting "premarket approval" to several manufacturers allowing NMR to be made available for commercial use and profit. Most of the scanners currently available have price tags ranging from \$1 to \$2 million. However, costs for both installation and operation could prove pro-



"We'd have a lot of healthy patients—if government forms could cure."

hibitive to a single NMR purchaser.

Sharing the cost of an NMR scanner may be the answer. Hospitals, private physicians groups and university medical centers are all concerned with rising costs.

With this in mind, one manufacturer has developed what appears to be the most practical, cost-effective NMR scanning device, a mobile unit. The mobile unit utilizes a 3000 gauss non-superconducting magnet and has more diverse capability than any other commercially available NMR unit. The truck-mounted mobile unit is the only one of its kind in the world and Temple University, Philadelphia, is the owner. With the mobile unit, there is no need for a separate facility or specialty chemicals, commonly called Cryogens, which are currently in short supply.

NMR represents a revolutionary advancement in medical technology. NMR will, for the first time, enable researchers to quantitatively measure the effectiveness of various treatments for disease, and ultimately will enable the medical profession to find cures that were never before thought possible.

Breast Self-Examination

Almost all American women believe in the efficacy of breast self-examination (BSE) but only one-third of them do it.

A Gallup survey for the American Institute for Cancer Research shows that 88% agree that there is a lot of value in self-examination and early detection. Eighty-one per cent reported that they have performed the exam at least once.

However, only 30% of the women in the survey stated that they had practiced BSE at least once a month during the preceding year. Once a month, regularly, all the time, is the recommended schedule.

All cancers start small and during a considerable, although unknown period of time, are curable by simple excision. Breast cancer is diagnosable when the tumor mass is very small as compared to the situation, years ago, when the mass was large enough to be observed visually at times and had, almost always, grown to more than one centimeter in diameter.

Breast self-examination is a tried and true method of locating a possible malig-

nant tumor at its earliest. BSE, followed by modern treatment methods, should raise the cure rate for breast cancer, possibly to fantastic heights.

The American Institute for Cancer Research has launched a public education campaign designed to encourage and remind women to perform regular breast self-examination.

Physicians should join the "encourage and remind" program. Every woman should be reminded of the spectacular curative effect of the program whenever she visits a doctor's office for whatever reason.

Lowering Health Care Costs

Guest Editorial

The lowering of health care costs is a top priority for the federal and state governments. The measures being utilized are aimed at regulation of hospital charges, the control of construction of hospitals and nursing homes, and an attempt to foster competition among physicians and bring down their fees.

Approximately 28% of our health care bill is accounted for by drugs and physician services. The majority of the remainder comes from hospital charges. It is easy to figure that hospitals with their large fixed costs, as well as being labor and technology intensive, are very expensive operations.

However, it is not too hard to figure out how we have arrived at such a situation. Just about every city wants its own hospital! It seems that it is a right of the people to expect health care to be right out the back door, so to speak. To help ensure that patients can be cared for and to ensure that physicians will utilize a particular hospital, the hospital wants to provide all of the service it can. This means expensive equipment must be acquired as well as the personnel to run it. This results in everyone who is admitted to the hospital ending up helping to pay for it regardless of whether they use it or not. This happens because the demand is just not always there. It is really a drain on the hospital's operating funds. Therefore, these costs must be borne by all the patients.

Will the regulation of hospital rates

stop this? No one knows for sure, but it appears that hospitals are going to have to become more efficient and really watch their costs. The DRG is just an example of what might be done to make the hospital adjust its rates.

It has been known for some time that we have too many hospital and nursing home beds. We do need something to curb the growth of these facilities. Health care planning bills were passed to help provide a mechanism to do this. However, it would appear that the regulations were not strong enough and were not free from political intervention. Health care planners, city planners and developers need to sit down and plan together. Which way is the city growing; do we need four hospitals downtown since X percentage of the population has moved to the suburbs; does each small community within our metropolitan area need a hospital? These are just a few of the questions that need to be answered and soon.

There is a problem when existing hospitals only have 60-80% occupancy rate and some people in the community demand a new hospital in their area, so they don't have to drive 5-6 miles.

While hospitals can lay off people to help offset the reduction in census there is a limit if the facility is going to maintain quality or survive. The only other recourses are go out of business or raise the rates. The latter may not be possible, if the government and insurance companies are regulating the hospital rates.

Predictions are proving correct and we will have physician surplus. The lowering of fees may be the result.—"Action in Pharmacy" newsletter, Kansas City, Mo.

The New Caste System

Guest Editorial

When Congress decided to require all hospitalized Medicare patients to have predetermined hospital and medical fees without exception, it just calmly excluded our senior citiznes from the mainstream of active American life.

Our retirees are now being herded into a nice predictable mass of people much easier to keep in control and within budget. Most of us did not work to receive a number at the butcher counter. We worked to make it possible to contribute to society and, in turn, reward ourselves with security and satisfaction in later years.

The incentive for personal retirement savings for Americans is being end-played by promises of Social Security. The resulting frustration, when Social Security fails to do all those things, wears on one's pride and optimism.

With abortion controlling the unwanted or potentially handicapped, the cloning of Americans is becoming more refined.

As senior citizens are relegated to the dole of Medicare benefits, the caste system of second-rate medical service for "second-rate citizens" becomes more clear.

The American Way is free enterprise and free competition. Controlling the doctor's fee by law should, in equity, also control the cost of doing business—including malpractice premiums, postgraduate training expenses, increased salaries for nurses and office personnel, and all the classes of service that make each physician unique to his patient. It doesn't do that.

From year one to one-hundred, our people deserve independence and not submission to legislated destiny.—C. Dyke Egnatz, M.D., Schererville

'Snakeroot Extract'

Letter to the Editor

The March issue of INDIANA MEDICINE included [as an insert] the new newsletter of the Indiana Historical Society's Medical History Committee, called "Snakeroot Extract."

(An item in the newsletter) contains material concerning the "milksick," which was a severe trial for the early Hoosiers. The statement is made that "the actual plant remained unknown until the 1920s." This may be true as far as the white man was concerned, but the Amerindians knew all about it.

About 1928, I had to treat a case of milk sickness at the Union Hospital, Terre Haute, with good results because what was needed was hydration by means unavailable to the pioneers. The history of the case was typical even to the

presence of white snakeroot in the woods near one of their pastures.

At that time, I had access to a small book published at Paris, Illinois by a Dr. Alexander, about 1825-1830. In it, he gave an account of a trip he made with a Potawotami chief in 1820 and, somewhere near the present site of Indianapolis, this chief showed him some white snakeroot and told him it was the cause of the "milksick" or in cattle the "trembles."

It is of further interest in this connection that Nancy Hanks Lincoln, the President's mother, died of milk sickness in southern Indiana.—A. W. Cavins, M.D., Terre Haute

Cold Water Immersion

A recent article in *Annals of Emergency Medicine* emphasizes the hypothermic effect of immersion in cold water and its eventual fatal effect even in water no colder than 63 degrees F and in immersions no longer than three hours.

However, it is reported that persons in cold water may go as long as 30 minutes without breathing and recover with no brain damage. This is attributed to the observation that the body has a diving reflex that protects the brain and heart when the body is suddenly plunged under water. In addition, cold temperatures slow the metabolism and lessen the need for oxygen.

This does not minimize the danger of hypothermia, however acquired. The Titanic sank in water at 32 degrees F and lost 1,489 passengers in under two hours. The only passengers or crew members who survived were in boats.



Look-Alike and Sound-Alike Drug Names

BENJAMIN TEPLITSKY, R. PH. Brooklyn, N.Y.

Look-alike and sound-alike drug names can be misinterpreted by a nurse reading doctors' orders or by a pharmacist compounding physicians' prescriptions. Such misunderstandings can result in the administration of a drug not intended by the prescriber. Awareness of such look-alike and sound-alike drug names can reduce potential errors.

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June 1984 INDIANA MEDICINE 473

Indiana's New Generic Substitution Law

EDWARD L. LANGSTON, M.D. Chairman

Commission on Legislation

GENERIC DRUG substitution law was approved during this year's Indiana General Assembly. This new law allows pharmacists, when certain conditions are met, to substitute a generically equivalent drug product in place of the brand name drug prescribed by the physician.

The following summary of the generic substitution law, which becomes effective July 1, 1984, is intended to help clarify how it will affect medical practice in Indiana

Revised Prescription Format

One of the most significant aspects of this law is the requirement that *all* prescriptions must be written on forms which have two signature lines, one of which must be signed for the prescription to be valid.

Under the signature line on the left side of the form must be printed the words, "dispense as written." Under the line on the right side of the form, "may substitute" must be printed.

In those instances where the pharmacist is allowed to substitute a generic drug in place of the brand name drug originally, prescribed, the physician would so indicate by signing the right-hand signature line, "may substitute."

By signing the left-hand signature line ("dispense as written"), generic substitution is prevented and the patient is assured of receiving the brand name drug originally prescribed.

Each physician must begin using the new prescription format by July 1, 1984. A sample of this new prescription form accompanies this article. When telephoning prescriptions to pharmacies, the physician, or a member of the physician's staff, must communicate his or her wishes to the pharmacist to allow or prohibit substitution. The pharmacist will be required to record prescribing instructions verbatim.

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You Must Begin Using This New Rx Format by July 1

Generic Substitution Permissable When:

- The patient agrees to the substitution.
- The physician indicates that the pharmacist may substitute by signing the appropriate line on the prescription form or by stating this to the pharmacist.

The New Law Also Mandates That:

- The pharmacist must record on the prescription (which is maintained in the pharmacy's files) the name of the manufacturer or distributor of the substituted drug product that is dispensed.
- The brand name of the prescribed drug may not be included on the prescription container's label unless it is the drug product actually dispensed.

This new law defines a generically equivalent drug as one containing an identical amount of active ingredients in the identical dosage form (but not necessarily containing the identical inactive ingredients) as the prescribed brand name drug. This drug product must meet the same physical-chemical standards in the Pharmacopeia of the United States

that the prescribed brand name drug meets. The generic drug also must be approved by the U.S. Food and Drug Administration. If a drug product is listed by the FDA as having actual or potential bioequivalence problems, it is not considered generically equivalent and, therefore, must not be substituted.

The Association believes that generic drug substitution should be permitted only when the prescribing physician is familiar with the pharmacy where the prescription will be filled and has confidence in the quality of that pharmacy's line of generic drug products. If this is not the case, a poor quality generic product could be substituted, with unpredictable therapeutic effects resulting from its use. To encourage across-the-board generic substitution is to relinquish partial control of the management of your patients to the pharmacist. It is in your best interest and that of your patients to insist that your prescriptions be filled exactly as you have written unless you are confident that high quality generic drugs would be substituted.



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MEDICAL PLAN 3

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19th Century Medicine in Indiana

An 1869 Clinical Report by J. S. Bobbs

RONALD D. GREENWOOD, M.D. Sacramento, Calif.

S. BOBBS* was born in Green Village, Franklin County, Pennsylvania and received the limited education available in his native village. At age 18, he moved to Harrisburg and studied medicine in the office of a Dr. Martin Luther. He attended one course of lectures at the University of Pennsylvania and entered practice in Middletown (Pa.) for four years and then moved to Indianapolis (in 1835). After a short time of practice in Largo, he returned to Indianapolis and practiced first with a Dr. Stipp and then by himself.

Dr. Bobbs distinguished himself and was one of the first Commissioners of the Indiana Hospital for the Insane and was elected in 1857 to the state senate. In 1850, he was appointed to fill the chair of anatomy at the Indiana Central Medical College and in 1851 the Chair of Surgery. During the Civil War, Bobbs served both in West Virginia and Indiana. In 1869 when the state academy of medicine decided to establish a medical college, Bobbs filled the chair of surgery but served for only one year until his death in 1870, age 61.

The author is an associate professor of pediatrics and chief, Division of Pediatric Cardiology, School of Medicine, University of California Davis Medical Center, 4301 X St., Sacramento 95817.

The last article written by Dr. Bobbs concerned facial hemangioma in infants.

It becomes a question in a case of naevus whether the surgeon should interfere and if so, whether by operative procedure or otherwise.

He then describes the types of nevi and the intervention for each.

On Dec. 11, 1869, he saw a sevenmonth female infant with a vascular growth on the right temple:

"... Just above the margin of hair, between the upper portion of the auditory canal and the angle of the eye. It was slightly elevated above the surrounding surfaces, had a light red color, flat disk and pulsated faintly. An ill-defined ridge ran around its periphery, and the superficial branch of the temporal artery, considerably enlarged, entered its lower margin. It was compressible and gave the sensation when depressed of having excavated the cranium beneath it. It was evident that the arterial vascularity predominated. It was congenital, had gradually increased in size . . ."

The only attempt at treatment by other physicians had been the application of collodian.

"The evident vascularity of the tumor, and the vigorous throbbing of the main artery nourishing it, induced me to adopt the ligature for its removal."

On December 14th using chloroform anesthesia, Bobbs operated upon the infant.

"I introduced a sharp-pointed, narrowbladed instrument under the cutis about an eighth of an inch from its border and incised the skin around it, while compressing the temporal branch that supplied it. Then I carried a needle from the section on one side to that on the other, closely along the excavated base. Removing the needle I passed it in the same manner at right angles with the first ligature, using the thread to draw the base of the tumor outward while I passed the needle beneath it. Attaching double ligatures to the single ones, they were made to take their places and the contiguous ends securely tied as to effectually strangulate the parts embraced in the circular channel made through the cutis and a portion of the subcutaneous tissue around the tumor. This assumed a bluish color at once and the hemorrhage which had been considerable ceased."

The patient recovered, although she ran a temperature and the slough separated and granulation tissue appeared. However, 14 weeks later the tumor was growing again and on March 18, 1870, again with chloroform, Dr. Bobbs operated. He made a circular section beyond the limits of the tumor, dissected the whole out, leaving nothing but the pericranium and the upper margin of the temporal fascia at the bottom of the wound.

Only one vessel was ligated and the patient did well.

On Dec. 28, 1869, Bobbs had attended another infant, seven weeks old, with a large hemangioma on the right upper lip. This was described as bluish, closed the right nostril and, since it was not throbbing, was felt to represent "enlarged veins." The tumor was removed and the patient did well.

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- Stevens TM: Biographical sketch of the late Prof. J. S. Bobbs. *Ind J Med*, 1:47, 1870.

^{*}John Stough Bobbs, M.D., a pioneer surgeon in Indiana, performed the world's first gall bladder surgery June 15, 1867. He was the 19th president (1868) of the Indiana State Medical Association.

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BOOK REVIEWS

Current Therapy in Allergy and Immunology

Edited by L. M. Lechtenstein, M.D., and Anthony B. Fanci, M.D. Copyright 1983, C.V. Mosby Co., St. Louis. 337 pages, \$44.

In this volume nearly a hundred investigator-clinicians present concise accounts of present therapy for the entire gamut of diseases considered to be due to immunologic disorders. In most immunology textbooks the emphasis is in pathogenesis and clinical manifestions, with therapy receiving minimum attention. This is understandable because in so many of these conditions only symptomatic treatment has been available up to this time. This situation still obtains to a large extent, but advances considered to be more specific when targeted at altered physiology are presented in this book, in addition to purely symptomatic measures

A short review of what is presently regarded as the basic immunopathology of the disorder under discussion is necessarily given at the start of each chapter. However, for the sake of brevity, these are only capsule accounts, the emphasis being on what, from a pragmatic standpoint, may be done to alleviate the patient's problems.

The treatment outlined for Sjogren's syndrome is a good example of the comprehensive manner in which measures other than corticosteriods are suggested. Patients with this affliction should see a rheumatologist, ophthalmologist and dentist at regular intervals. For the ocular manifestations tear substitutes, night time lubricating ointments such as Lacrilube, sometimes protective soft contact lenses, and immediate antibiotic treatment of infections are recommended. Topical steroids are not to be used because they often make the patient more susceptible to infection. For dry mouth, sipping fluids throughout the day is necessary. Drugs, such as atropine, are to be avoided because they inhibit oral secretion. Oral candida may invade the mouth, especially if the patient is on steroids. Mycostatic suspensions are effective to combat candida, which also may cause cheilosis. Intermittent parotid gland enlargement is often painful. Local heat, and mild

analgesis should help. Irradiation of these enlarged, painful glands and cytotoxic drugs should be avoided because they increase the risk of developing reticuloglandular neoplasm. Nasal dryness is best combatted with normal saline sprays or drops, not oil based lubricants. Gum problems, very prevalent in this disease, should be handled in cooperation with the dentist

As in other auto-immune disorders, Sjorgren's disease is not always limited to the local areas where it first manifests itself. Accompanying interstitial pneumonitis is common enough to warrant chest films every six months. If present, steroids in proper dosage should be started at once. Auto-immune lesions in the kidneys, thyroid (Hashomoto's disease), skin (systemic sclerosis), and Raynaud's phenomenon are frequent enough in association with Sjorgren's syndrome that the physician should always be on the alert for them. Pseudolymphoma is common in these disorders. If recognized early and treated with cytotoxic agents such as cyclophosphamide true lymphoma is less likely to develop.

The therapies of many diseases such as multiple sclerosis, myasthenia gravis, ulcerative colitis, Crohn's disease and other disorders thought to be associated with altered immune mechanisms are considered in this volume. Although steroids are not successful in effecting a cure in these situations their place in therapy along with the other measures to control symptoms are evaluated.

Every physician dealing with the large body of immune disorders will, in this volume, doubtless pick up suggestions for symptomatic control which he may not have thought of before. The book is certain to be useful in that regard.

Paul S. Rhoads, M.D.
Richmond
Internal Medicine

Drug Intelligence Publications announce a new greatly expanded fifth edition of *Handbook of Clinical Drug Data*. The book contains 669 pages and provides the essential information needed to make professional judgments in clinical practice. \$29.50.

Percutaneous Renal Surgery

Edited by J.E.A. Wickham and R. A. Miller. Copyright 1983, Churchill Livingstone, Inc., New York. 161 pages, 89 illustrations, 14 tables. \$40.

The advent of fiberoptic light transmission applied to endoscopy is the scientific advance behind the current use of the percutaneous route for stone removal from the kidney. In this technique a nephrostomy tract is dilated to allow an instrument (cystoscope or the newer "renoscope") to be used to visualize and either remove or pulverize renal pelvic calculi. The use of either ultrasound or electrohydraulic energy probes have replaced the lithotrite as used in the urinary bladder to actually shatter the stone. Thus the need for a book outlining these techniques.

The six chapters cover the field and include introductory passages on anatomy (so important in making the original tract using fluoroscopy) and a most complete section on the actual instruments and their strengths and weaknesses. These authors make the point that the rigid lens system gives the only satisfactory optical resolution and is wide enough internally to allow sufficient fluid irrigation to use the operating probes and forceps.

For the urologist initiating percutaneous surgery, this is a valuable book. I admire the English genito-urinary surgeons who authored the text for their frank admission that this is a new technique with relatively untried instruments and so subject to pioneer limitations and future modifications. They become repetitious by the middle of the text but are correspondingly comprehensive. The illustrations are clear and relate to the narrative satisfactorily.

Altogether a very thorough and forthright production. Highly recommended to us doing renal calculus surgery. It is well to note that practicing urologists must include percutaneous surgery when discussing alternative therapies to patients with renal pelvic stones. This technique is no longer experimental.

> Rodney A. Mannion, M.D. LaPorte Urological Surgery

Radiologic Atlas of the Colon and Rectum

By Dr. Jakob Altaras. Copyright 1984, Urban & Schwarzenberg, Baltimore. 300 pages, hardcover, \$65.

This is an excellent atlas of double contrast examinations of the colon showing a wide selection of high-quality radiographs. The films reproduce quite well and demonstrate the most frequently encountered pathology and normal variants in most radiology practices. Included are sections on tumors, diverticular disease, and an excellent collection of films depicting the different stages of inflammatory bowel disease. There are also specific chapters dealing with the ileocecal region and the rectosigmoid region. Descriptions accompanying each chapter are concise and relevant. Also given are pertinent differential diagnoses and diagnostic pitfalls.

The author's description of his techniques for performing the double contrast colon examination are also included. While these techniques obviously produce superb examinations, the method appears

time-consuming and impractical for use by a general practice radiologist.

We believe this atlas to be a fine addition to the library of any practicing radiologist or other physician interested in G1 radiology.

Jack J. Moss, M.D. Richard A. Silver, M.D. Indianapolis Radiology

Menu Planning

3rd Edition, by Eleanor F. Eckstein, Ph.D., R.D. Copyright 1984, AVI Publishing Co., Westport, Conn. 463 pages, hardcover, \$26.

The third edition of *Menu Planning* provides a thorough illustrated reference to menu planning in hospitals, nursing homes, retirement homes, industrial cafeterias and student cafeterias in educational institutions. Various of the book's 68 chapters deal with planning for patients, for hospital employees and others of all ages. Diets suitable for various races and religions are discussed.

The new edition explains the use of computers in modern menu planning.

The book will be made an important part of our departmental library. Dietetic interns have been instructed to refer to it as they plan menus.

> Mary A. Carder, R.D. Director, Dietetic Internships Methodist Hospital of Indiana

Prentice-Hall has just released Medical Secretary's and Assistant's Encyclopedic Dictionary. The authors are Leonard Karlin and Muriel Schoenbrun Karlin. The complete, one-volume reference provides instant access to office duties, procedures and terminology for medical assistants. It is alphabetized and contains definitions of all terms commonly used in medical practice, descriptions of office methods and sample forms for speeding up the paper work. 241 pages, \$19.95.

Thieme-Stratton announces *Clinical Pharmacology in Pregnancy*. The focus of the book is on the role of clinical pharmacology in pregnancy and the rational use and evaluation of drug prophylaxis and drug therapy. 386 pages, hardbound, illustrated, \$75.

This Publication is available in Microform.



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NEWS NOTES

Accidental Poisoning

Today 25% of American families with children under 18 are headed by single parents, the majority of whom work outside the home. And it is increasingly common to find two working parents in a family. Children are therefore often cared for by a third party during their parents' working hours. But accidents involving children, including accidental poisoning, can occur at any time, and parents must be sure that the person caring for the child is informed and prepared to deal with such aceidents. Commenting on the problem, Frazier Cheston, president of the Council on Family Health, stated: "All parents, and particularly working parents, must ask themselves the following questions to assure their children's safety against accidental household poisonings:

- Are you fully aware of the poisons you have in your home and the dangers they present to your child?
- Have you placed all potential poisons out of your child's reach?
- Does the person caring for your child have a list of the phone numbers of your child's doctor and the nearest poison control center; and does he or she know where antidotes are kept and how to use them properly?"

The Council on Family Health, a public service of the manufacturers of medicines, offers these additional tips on poison prevention:

• Keep all medicines and ingestible household products out of sight and reach of children, locked away if possible. When in use, these items should never be out of sight of adults—even for the time it takes to answer the telephone.

- Whenever you give medicines, read label directions carefully, in good lighting.
- Safely discard prescription drugs no longer being taken under a doctor's advice.
- Always ask your pharmacist to supply child-proof packaging. Be sure to replace child-proof caps securely.
- When talking to children, never refer to medicines as "candy."
- Avoid taking medicines in front of children.
- Store medicines separately from household products.
- Be sure to have syrup of ipecac on hand. This will be helpful in those situations when it is necessary to induce vomiting. (When certain strong corrosives such as lye, acid, or a drain cleaner are swallowed, *inducing vomiting can be harmful* to the patient. Always check with a doctor or a poison control center before taking such action.)

The Council on Family Health offers a "First Aid in the Home" chart, which tells what to do in the event of poisoning and other household emergencies. Single copies are available free of charge by writing to: Council on Family Health, 420 Lexington Avenue, New York, New York 10017. Additional copies are available at 50° each.

DRG Monitoring Project

The AMA is launching a program to monitor physicians' experience with the Prospective Payment System (PPS). Under the PPS, most hospitals participating in Medicare will be reimbursed on a flat rate according to a diagnosis related group (DRG).

The AMA is interested in learning of individual physicians' experiences, both positive and negative, which they feel are attributable to the PPS reimbursement system. While all relevant experiences are of interest, particular areas of concern are costs of care, quality of care, length of stay, hospital admission/discharge policies, medical staff relations with hospital administration, and utilization review.

Experiences should be outlined in a brief letter and mailed to: AMA DRG Monitoring Project, Dept. of Health Care Resources, P.O. Box 10947, Chicago 60610

Resident Medical Society

ISMA's newly formed Resident Medical Society received its charter during the component society's first interim meeting, held in April at the Lilly Corporate Center in Indianapolis. RMS delegates will represent Indiana physicians in training at policy-making meetings of the ISMA and AMA.

The following resident physicians, all of whom are serving residencies in Indianapolis hospitals, were elected: Dr. Steven G. Lester, president; Dr. John G. Terry, president-elect; Dr. Silvio Garcia, secretary-treasurer; Drs. Mark Hochstetler and Gary E. Campbell, AMA delegates; Drs. F. Steven Land and Rick Crawford, AMA alternate delegate; pr. Steven G. Lester, ISMA delegate; and Dr. Wayne B. White, ISMA alternate delegate.

Fee Freeze Approved

The Asian-American Medical Society of Northwest Indiana recently approved the request of the AMA in regard to freezing fees in cooperation with the general control of increasing costs of medical care.

Approximately 260 Asian-American doctors practice in Lake and Porter Counties. They comprise about 35% of the actively practicing medical professionals in the area.



Do you have a new colleague who doesn't belong to the Indiana State Medical Association? Call Mrs. Rosanna Iler at (317) 925-7545 or 800-382-1721 (WATS) for a free membership kit.

Air Force Report on Agent Orange

The following report was prepared by Lt. Col. Maurice L. Lien (USAF Retired), executive editor of The Retired Officer. It is reprinted with permission from the magazine's April 1984 issue.

An Air Force "Ranch Hand" study has found that there is insufficient evidence to link the spraying of a herbicide, commonly called Agent Orange, in Vietnam to any illnesses contracted later by air and ground crews.

Over a nine-year period, under a program code-named Ranch Hand, the Air Force sprayed some 19 million gallons of herbicides over South Vietnam including about 11 million gallons of Agent Orange. Now, scores of American veterans of the Vietnam War blame their exposure to the dioxin-laced herbicide for a wide variety of medical problems.

The Air Force estimates that an average Ranch Hander received, at a minimum, 1,000 times more exposure to Agent Orange than would an unclothed man standing in an open field directly beneath a spraying aircraft. Given this, the "doseresponse" principle suggests that Ranch Handers should show stronger or earlier indications of adverse health.

The morbidity study involved 1,045 "Ranch Handers" and a comparison group of 773 persons who had served in Vietnam but were not involved in aerial-spray operations. Five follow-up studies will be conducted over the next 20 years, with the first in 1985.

Clinically, the Air Force said, there were no differences in the commonly used index measurements of general health, and both the Ranch Handers and comparison groups were in good health for their ages. Officials were cautious, however, and said that there is "a degree of concern" over some findings. Significantly more nonmelanotic skin cancer was noted in the Ranch Hand group, for example, but these analyses have not yet been adjusted for sunlight exposure, a major cause of such cancers.

The study found no statistically significant differences in the occurrence of malignant or benign systemic tumors, cancers or occurrence of liver or heart diseases between the two groups.

Major General Murphy A. Chesney, deputy Air Force surgeon general, said the overall findings should be "reassuring" to Ranch Handers and their families. "These men are not dying off like flies," he said. "They are healthy people."

Intraoperative Radiation Therapy Being Studied

The intraoperative use of radiation treatment in case of malignancy is the subject of clinical investigation by a group of oncologists from various surgical disciplines and the Department of Radiology at Indiana University School of Medicine. Based on the long established principle of concentrating radiation energy on the malignant tumor to the maximum degree while protecting sur-

rounding normal tissue to the greatest extent possible, the intraoperative method applies the radiation during an operation which has exposed the tumor and possibly removed as much as possible surgically.

Surrounding normal tissue is screened with protective barriers and an electronic beam from the Microtron head is applied in a dosage between 2 and 22 million electron volts. The dose is adjusted to allow the energy to dissipate within the depth of the tumor, thus conserving the normal tissue which lies in the deeper course of the beam, if it is not interrupted.

The source of the electron beam is the \$1 million Scanditronix Medical Microtron furnished to the Department of Radiation Oncology by the Indiana Lions Clubs. It is described at 1.U. as "the most versatile piece of radiotherapy equipment in the world."

Help for the Elderly

About 160 University of Notre Dame students have become the nucleus of Volunteers Organized in Community Services (VOICES), an outreach program designed to coordinate resources for the frail and vulnerable elderly in the South Bend-Mishawaka area.

VOICES was formed as an all-volunteer alternative to a similar program funded by the Retirement Research Foundation and operated in cooperation with Notre Dame's Center for Gerontological Education, Research and Services. Funding ended last fall.

Physician Recognition Awards



The following ISMA physicians are recent recipients of the AMA's Physician Recognition Award. This award is official documentation of Continuing Medical Education hours earned, and is acceptable proof in most states requiring CME in re-registration that the mandatory hours of CME have been accomplished.



Baker, George L., Evansville Carpenter, Pramod K., Evansville Haddad, Rolando 1., Jeffersonville Harvey, William D., Logansport Haymond, Joseph L., Noblesville Kilgore, Byron W., Fort Wayne Ly, Lily A., Portland McGarvey, William K., Indianapolis Mirich, Ernest C., Crown Point Petrie, Raymond G., Remington Reitz, Lawrence A., Zionsville Rice, Ronald B., Indianapolis Rudzinski, Walter W., Valparaiso Ruedisueli, Glennard S., Evansville Steffy, Ralph M., Portland Stout, Daniel J., Carmel Tharp, John D., Muncie Whiteman, Timothy R., Vincennes

news notes

Here and There . . .

- ... Dr. Christopher A. Foster of Anderson has been board certified as a gastroenterologist.
- Lawrenceburg discussed operative treatments for arthritis during a chapter meeting of the National Arthritis Foundation at Dearborn County Hospital.
- ... **Dr. Frederick B. Stehman** of Indianapolis has been named director of the Section of Gynecologic Oncology at the I.U. Medical Center.
- dianapolis presented an article entitled "Abdominal Incisions" at a recent meeting in New Orleans of the Society of Gynecologic Surgeons, of which he is immediate past president.
- ... **Dr. John A. Galea** of Michigan City addressed a meeting in March of the LaPorte County Multiple Sclerosis Support Group.
- been elected president of St. Catherine Hospital, East Chicago; Dr. James J. Chen is secretary-treasurer.
- Shelbyville family physician since 1946, retired from active practice in March.
- ... Dr. Joseph E. Geyer of Noblesville discussed "Cancer Risks in Women" in April during a Women's Luncheon Series sponsored by Riverview Hospital.
- has been appointed to the Committee on Drugs and Devices of the American Academy of Family Physicians.
- . . . Dr. Marcella L. Modisett, an Ob-Gyn specialist who practiced 38 years in Madison, has retired.
- dianapolis discussed "Ulcerative Colitis and Crohn's Disease" during the April meeting of the United Ostomy Association, Indianapolis chapter.
- ... Dr. Thomas J. Hibbeln of Danville addressed an Ostomy Support Group in April at the Hendricks County Hospital.
- ... Dr. John R. Crist of Mount Vernon has assumed duties as director of medical affairs at Deaconess Hospital, Evansville.
- ... Dr. George N. Lewis of Bloomington has been elected to fellowship in

the American Occupational Medical Assn.

- and Dr. Joseph G. Garrity of Evansville conducted a CPR course in March for 12 Jasper area physicians. The course was sponsored by the DuBois County Heart Assn., St. Joseph's Hospital of Huntingburg and Jasper Memorial Hospital.
- ... **Dr. Jeffrey C. Darnell** of Indianapolis has been elected to fellowship in the American College of Physicians.
- ... Dr. Frank A. Benchik, an East Chicago family physician, has been named recipient of the 1984 St. Joseph the Worker Award by the Calumet College board of directors.
- dianapolis, chief physician for Championship Auto Racing Teams (CART), was the luncheon speaker at the May meeting of the Carmel-Clay Chamber of Commerce.
- A. Miller, Jeffry C. Rendel, J.P. Salb and Kim A. Volz of Jasper and Dr. Swaroop Rai of Huntingburg recently presented a two-session public educational seminar on heart disease and its prevention.
- Wayne cardiologist, addressed the April meeting of the Wabash County Heart Association.
- ... Dr. Andrew Thieneman Jr., endocrinologist at the Caylor-Nickel Research Institute, Bluffton, will direct a clinical investigation on diabetic patients with neuropathy; Caylor-Nickel is one of 10 U.S. research centers participating in the study.

AHA Audiocassettes

The American Hospital Association, in cooperation with the AMA, has developed three audiocassette programs to aid physician members of hospital medical staffs and the administrative officials of hospitals to adequately manage the medical services under the new prospective payment system, and to adapt the service to Preferred Provider Organizations.

"A New Commitment: Hospital/ Physician Relationships Under Prospective Pricing" includes three audiocassettes and print supplements with program guide, tape overview, related articles and bibliography, all contained in a single package. Item number is AHA 145603. AHA member price is \$125. Nonmember price is \$160.

"Preferred Provider Organizations: Financial Incentives for Purchasers and Providers" includes three audiocassettes with a supplemental publication, a program guide, reprints of selected articles on PPOs, a bibliography, a PPO profile and discussion guides. Item number is AHA 001601. AHA member price is \$125. Nonmember price is \$160.

"Informed Sources" is a year-long program with 30-minute monthly audio-cassettes featuring multiple viewpoints, forecasts and analyses direct from consultants, health care, corporate and insurance executives and other leading thinkers in the health care industry. Monthly cost is about \$10 and 30 minutes listening time to hear the inside track on emerging health care management issues. AHA member price is \$125. Nonmember price is \$175 per year.

To order phone (312) 280-6020. For a copy of the brochure giving all details write to AHA, 840 N. Lake Shore Drive, Chicago 60611, Attn: Dawn Pearce Bley.

Valle Vista Hospital

The CPC Valle Vista Hospital in Greenwood has been granted provisional membership in the National Association of Private Psychiatric Hospitals. The association represents private psychiatric hospitals to government, business, industry, the media and the public. The hospital operates as a specialty psychiatric and chemical dependency hospital for adults and adolescents.

Flying Physicians to Meet

The 30th annual meeting of the Flying Physicians Association will be held July 22 to 27 at the Chateau Champlain Hotel, Montreal, Canada. Most of the lectures will be devoted to medical topics, with a few devoted to aviation and aviation medicine. The association is open to all doctors who hold a current pilot's license.

New ISMA Members

The following physicians were welcomed in April as new members of the Indiana State Medical Association:

Robert N. Addleman, M.D., Indianapolis, anesthesiology.

William I. Babchuk, M.D., South Bend, radiology.

David L. Brown, M.D., Indianapolis, diagnostic radiology.

Gary E. Campbell, M.D., Plainfield, therapeutic radiology.

Walter H. Dearmitt, M.D., Columbus, family practice.

John E. Garber, M.D., Indianapolis, orthopedic surgery.

Joseph M. Gilson, M.D., Indianapolis, radiology.

Brian M. Gross, M.D., Indianapolis, internal medicine.

Robert J. Harker, M.D., Indianapolis, anesthesiology.

Mark W. Harris, M.D., Evansville, emergency medicine.



Jesse D. Hoff, M.D., Evansville, family practice.

Mary M. Maloney, M.D., Indianapolis, psychiatry.

Mary C. McCarthy, M.D., Indianapolis, traumatic surgery.

Leonora G. Noel, M.D., Warsaw, pediatrics.

Linda Rezab, M.D., Indianapolis, obstetrics and gynecology.

David B. Ross, M.D., Indianapolis, therapeutic radiology.

William P. Ruckman, M.D., Lafayette, obstetrics and gynecology.

James D. Schroering, M.D., Indianapolis, nuclear medicine.

Jeffrey P. Squires, M.D., Lafayette, pathology.

David E. Wilson, M.D., Indianapolis, endocrinology.

John R. Woods, M.D., Lafayette, emergency medicine.

Martha L. Yoder, M.D., Indianapolis, family practice.

George M. Young, M.D., Indianapolis, cardiovascular diseases.

For the Asking . . .

Available to physicians for the asking are:

- Physician impairment presentations by local and national speakers were taped during the March ISMA seminar on physician impairment. Cassette tape topics include: The Nature of Impairment by Substance Abuse, Implementation of Comprehensive Impaired Physician Programs, and Issues of Implementation. For information and ordering contact: Conference Audio, 3030 N. Russell Road, Bloomington, Ind. 47401—(812) 336-1776.
- "Achieving a Successful Medical Retirement" is the title of a series of seminars sponsored by the American Association of Senior Physicians (AASP). Seminars are being held this year in Montreal, Las Vegas, Kansas City and Tampa. For information write to the AASP, 536 N. State St., Chicago 60610.
- "Doctor, You've Been Lied To" is the name of a 27-minute, 16mm color film or videotape that points out ways in which alcoholic patients deceive their doctors. Stressed is the importance of diagnosing alcoholism early so alcoholic patients can face up to their condition and do something about it. Part of the treat-

- ment recommended in the film is use of the drug Antabuse, made by the film's sponsor. To view the film, contact Ayerst Laboratories, Medical Film Library, 1430 Broadway, New York, N.Y. 10019—(212) 921-0929.
- · "Fighting Back: Helping Young People Kick the Sniffing Habit" is a 12-page illustrated pamphlet intended to aid in efforts against inhalation abuse. It is designed to inform adults about the habit so they will be able to help children stop this drug-related practice. Inhalation abuse involves aerosols and other products such as adhesives, solvents, nail polish, glue, paint and even typewriter correction fluid. Single copies of the pamphlet, published by the Chemical Specialties Manufacturers Association, may be obtained free of charge by sending a self-addressed long envelope to Publication Sales, Attn: Betsy Nilanont, CSMA, 1001 Connecticut Ave., N.W., Suite 1120, Washington, D.C. 20036. (The CSMA grants permission to reproduce the pamphlet in its entirety only, provided that the CSMA is identified as copyright holder.)
- "Health Care Facilities Handbook," a new hardcover book containing the entire text of the 1984 Standard for Health Care Facilities, is available from the Na-

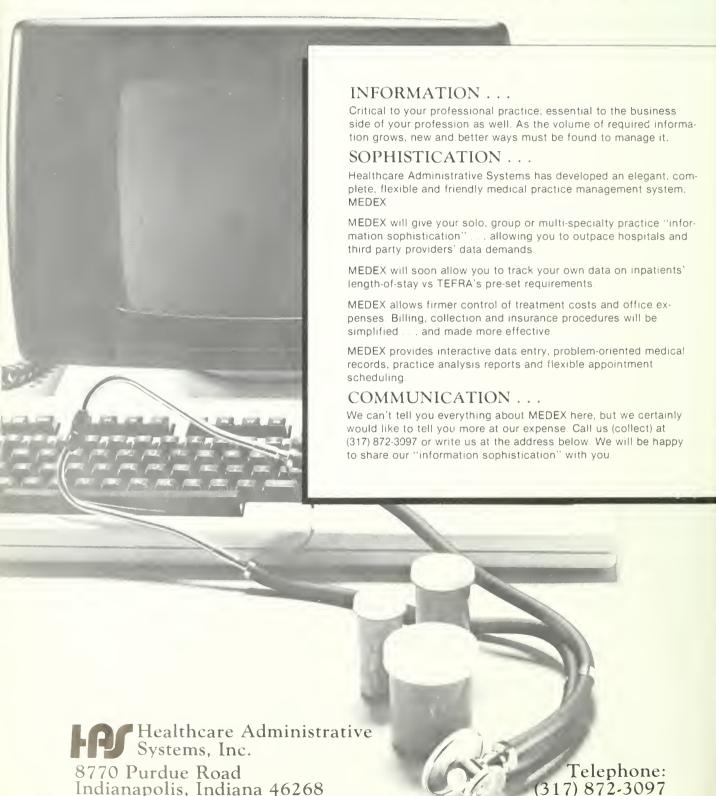
tional Fire Protection Association. Topics covered include laboratory sprinkler requirements, hyperbaric chamber construction, storage of flammable and nonflammable gases, electrical safety practices, emergency electrical power criteria, safe use of inhalation anesthetics, and safe practices for respiratory therapy. \$32.50. Write NFPA, Batterymarch Park, Quincy, Mass. 02269.

'Hearing Ear' Dogs

"Hearing ear" dogs are being trained as companions to those with greatly impaired hearing and are now allowed to enter public places such as restaurants, shopping centers, and even airplanes, much the same as "seeing eye" dogs. The training includes both hand and voice signals and the ability to react to some 23 different sounds such as alarm clocks, crying infants, smoke alarms and telephone bells.

The Wright Institute of Otology, Indianapolis, has announced intense interest in development of training facilities for such dogs. It is estimated that there are about 1.3 million Americans with a hearing disability severe enough to warrant the services of a "hearing ear" dog.

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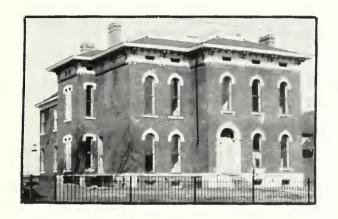
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References: 1. Kales J et al: Clin Pharmacol Ther 12.691-697, Jul-Aug 1971. 2. Kales A et al: Clin Pharmacol Ther 18.356-363, Sep 1975. 3. Kales A et al: Clin Pharmacol Ther 19.576-583, May 1976. 4. Kales A et al: Clin Pharmacol Ther 32:781-788, Dec 1982. 5. Frost JD Jr, DeLucchi MR. J. Am Genatr Soc 27:541-546, Dec 1979. 6. Kales A, Kales JD: J Clin Pharmacol J140-150, Apr 1983. 7. Greenblatt DJ, Allen MD, Shader RI. Clin Pharmacol Ther 21:355-361, Mar 1977. 8. Zimmerman AM. Curr Ther Res 13:18-22, Jan 1971. 9. Amrein R et al: Drugs Exp Clin Res 9(1):85-99, 1983. 10. Mont JM. Methods Find Exp Clin Pharmacol 3:303-326, May 1981. 11. Greenblatt DJ et al: Sleep 5(Suppl. 1):518-S27, 1982. 12. Kales A et al: Pharmacology 26:121-137, 1983.

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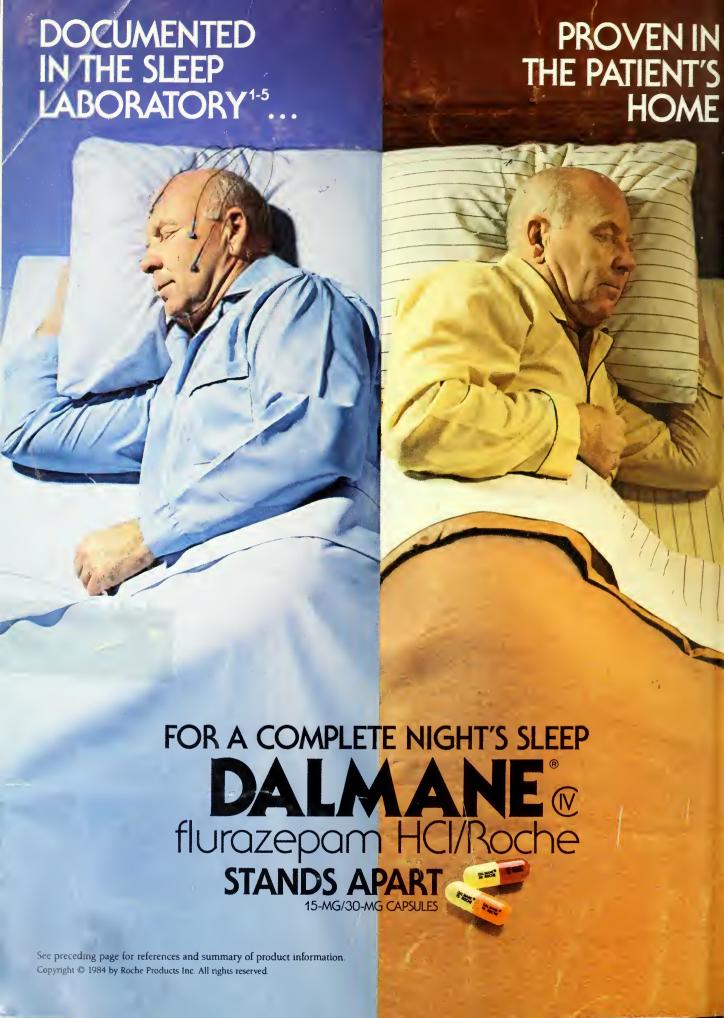
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